SAN TOMAS CREEK

PLANNING STUDY

Route 237 to Highway 101

consisting of

ENGINEER'S REPORT

AUGUST 1995

Santa Clara Valley Water District

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SAN TOMAS AQUINO CREEK PLANNING STUDY

Route 237

to

Highway 101

ENGINEER'S REPORT

Project No. 2019

Engineer's Report Prepared by Flood Control Planning Division

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TABLE OF CONTENTS

Page

INTRODUCTION 1

BACKGROUND 1

1995 STORM ANALYSIS 5

PROJECT DESCRIPTION 6

Option 1. No Project Option—Continue the Maintenance Program 9
Option 2. Add Height to the Levees Above the As-Built Levee Elevations 12
Option 3. Dredge/Excavate the Channel to Restore the As-Built Channel Sections 16
Option 4. Combination of Options 1 and 2 16
Option 5. Combination of Option 1 with Alternate Channel Sides Dredged 19

PROJECT SELECTION 19

PROJECT COST, FINANCING, AND SCHEDULE 19

CONCLUSIONS AND RECOMMENDATIONS 19

TABLES

TABLE 1 Reach Location—1995 Existing Capacity 6
TABLE 2 No Project—Continue the Maintenance Program 13
TABLE 3 Option 2—Add Height to the Levees Above the As-Built Levee Elevations 15
TABLE 4 Option 3—Dredge\Excavate the Channel to Restore the As-Built Channel Sections . 17
TABLE 5 Option 4—Combination of Options 1 and 2 18
TABLE 6 Combination of Option 1 With Alternate Channel Sides Dredged 21
TABLE 7 Summary of Objective Criteria 22
TABLE 7 Summary of Conceptual Options 23

FIGURES

FIGURE 1 San Tomas Aquino Creek Downstream Old Mountain View-Alviso Road 2
FIGURE 2 1939 Aerial Photograph 3
FIGURE 3 Land Surface Subsidence Near Highway 237 and San Tomas Aquino Creek 4
FIGURE 4 Location Map 7
FIGURE 5 1978 San Tomas Aquino Creek Flood Control Project—Typical Sections 8
FIGURE 6 San Tomas Aquino Creek Maintenance Activities Under CDFG MOU (7/90) 10
FIGURE 7 Sediment Monitoring Cross Section 11
FIGURE 8 Add Height to Levees Above the As-Built Levee Elevations 14

PLATES

Title Sheet and Location Map 1
San Tomas Aquino—Profile Sheet 2
San Tomas Aquino—Profile Sheet 3
San Tomas Aquino—Profile Sheet 4
San Tomas Aquino—Profile Sheet 5
San Tomas Aquino—Profile Sheet 6

APPENDICES

APPENDIX A Environmental Review—Categorical Exemption A-1
APPENDIX B Board of Directors Agenda Memorandums B-1
APPENDIX C Comments and Responses C-1

INTRODUCTION

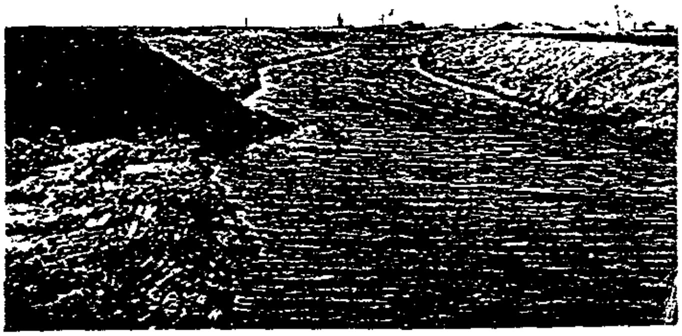
This report presents the results of an investigation of the high water elevations which were observed along San Tomas Aquino Creek north of Highway 101 to Route 237 during the January and March 1995 storms.

BACKGROUND

In 1961 the Santa Clara County Board of Supervisors, acting in behalf of the Santa Clara County Flood Control and Water Conservation District (which later became the Santa Clara Valley Water District (District)), approved a report titled "Engineer's Report of Proposed Improvements for Zone NC-1, the North Central Zone—January 1961." Certain improvements were proposed for San Tomas Aquino Creek (see photograph), including the reach between the present day Highway 101 and Calabazas Retarding Basin. The report recognized that "proper maintenance of all flood control facilities is of vital importance to any flood protection program . . . and . . . that streams become clogged by natural growth and the deposits of rubbish." It was anticipated that as the years went by the District would acquire "property rights in all such natural watercourses, and, when such rights were acquired, the District, being owner of such stream channels, will maintain them." Channel maintenance was to be accomplished in one of the following ways:

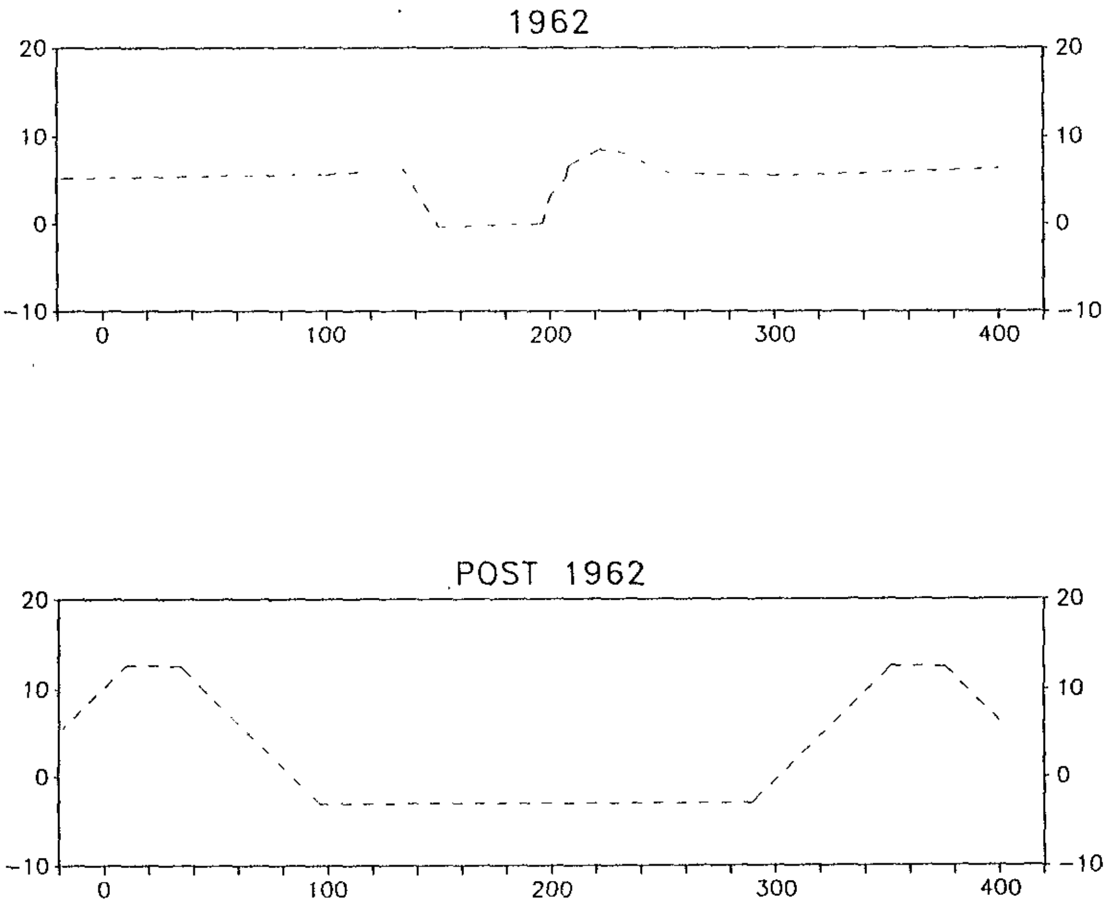
- Silt removal
- Snagging and clearing of tree and shrubbery growth within the channel
- Erosion control to prevent silting
- Clearance of debris

During 1964 and 1965, in accordance with the recommendations of the 1961 report, the District constructed the initial flood control improvements downstream of Highway 101 and including the Calabazas Retarding Basin as an interim project to protect the area from the more frequent floods. The design was for a trapezoidal earth channel with levees. The channel was 2 to 3 times wider than the existing creek and the invert was excavated 2 to 3 feet lower (Figure 1). The Calabazas Retarding Basin was a new earthen bypass channel approximately 2,000 feet long and 230 feet wide which was excavated to carry all San Tomas Aquino Creek flows to the Guadalupe Slough (Figure 2). The design criterion at that time was for a 50-year storm. However, by 1978 the design capacity had been reduced in some areas to equal a 10 percent flood due to land subsidence (Figure 3).



San Tomas Creek Downstream of Highway 237
Existing Condition, July 1963

SAN TOMAS AQUINO CREEK
1939 AERIAL PHOTO



SAN TOMAS AQUINO CREEK
DOWNSTREAM OLD MT. VIEW–ALVISO RD.

Figure 1

LAND SURFACE SUBSIDENCE
NEAR HIGHWAY 237 AND SAN TOMAS AQUINO CREEK

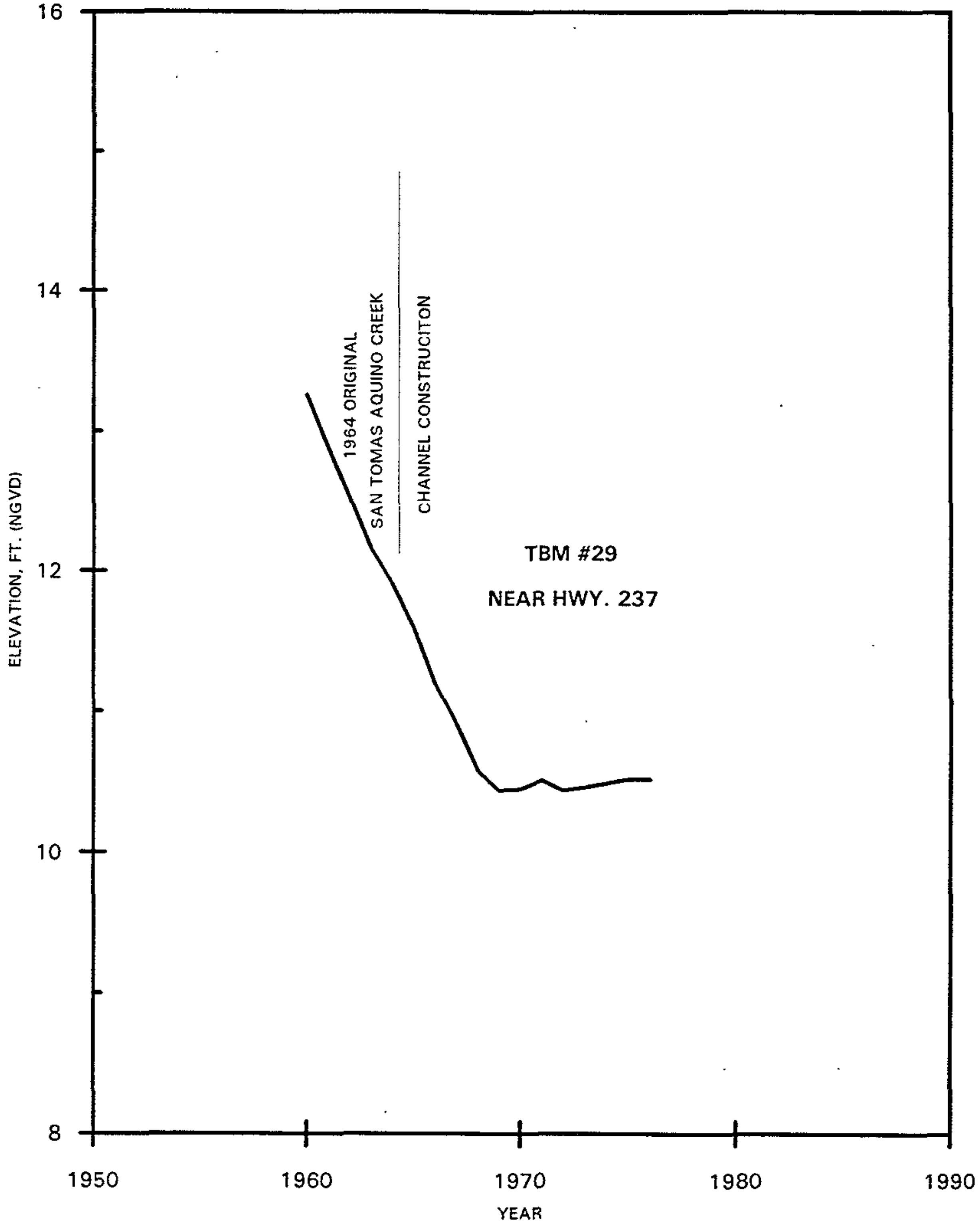


FIGURE 3

In February 1978, the Board approved the San Tomas Aquino Creek Planning Study which proposed further flood protection improvements between Highway 101 and the Calabazas Retarding Basin. The improvements were designed to contain the 1 percent flow rate of 9,100 cubic feet per second (cfs) with freeboard. The channel between Highway 101 and Old Mountain View-Alviso Road was described as having "vegetation confined to the channel bottom." The lower reaches had "abundant vegetation on the creek bank and the channel bed" providing "a very diverse wildlife habitat." For this reason, the plan was selected to preserve the existing channel. From Highway 101 to Mission College Boulevard, the plan consisted of raising the levees with gabion lining along the channel banks. From Mission College Boulevard to Tasman Drive, the plan consisted of raising the levees with some channel widening. No additional work was anticipated from Tasman Drive to Old Mountain View-Alviso Road.And from Old Mountain View-Alviso Road to Route 237, the plan consisted of only raising the levees.

The 1978 design freeboard was established by the water surface profile elevation for the upper 80 percent confidence limit flow rate of 12,100 cfs. In the lower reaches of the project the levee heights were increased an additional 1 foot. The overall freeboard ranged from 2 to 2.5 feet.

1995 STORM ANALYSIS

The January storm corresponded to approximately a 5-year event. The peak flow for the storm downstream of Highway 101 was estimated to be 4,500 cfs. During the peak flow, the channel exhibited near bankfull capacity with close to zero feet of freeboard observed in spots upstream of Route 237 and Tasman Drive. Elsewhere the average freeboard was 2.3 feet from Route 237 to Great America Parkway, 2.7 feet from Great America Parkway to Mission College Boulevard, and 5.4 feet from Mission College Boulevard to Highway 101. This event resulted in no flooding.

Similar high water elevations were observed during the March storm event. During the peak flow downstream of Highway 101, the channel again exhibited bankfull capacity and resulted in no flooding. For these reasons, the peak flow for the March storm was estimated to be along the same order of magnitude.

The January peak flow and existing channel characteristics were estimated from an HEC-2 hydraulic model based on 1995 cross sections, field data collected after the storm event, and information provided by the Hydrology Section. An analysis was then performed to determine the causes of the high water elevations observed. The high water marks from the January storm were surveyed from Route 237 to Scott Boulevard. These marks were used in the HEC-2 hydraulic model to determine the flow and existing channel roughness values (Manning's "n," a measure of the channel's resistance to flow). The analysis showed that the high water elevations were due to both vegetation growth and sedimentation along the channel. The composite channel "n" values found were 0.053 upstream of Route 237, 0.057 upstream of Old Mountain View-Alviso Road, 0.052 upstream of Great America Parkway, 0.043 upstream of Great America's parking bridge, and 0.04 upstream of Agnew Road to Highway 101. The composite channel "n" values determined in the analysis far exceed the 0.03 "n" value used in the 1978 design of the channel north of Highway 101.

As noted in the 1978 Planning Study, there was vegetation present along the channel bottom from Highway 101 to Route 237 with an abundant amount of vegetation along the creek banks north of Old Mountain View-Alviso Road. In the latter area, the vegetation was not disturbed since the improvements consisted of only raising the levees. The channel improvements also proposed hydroseeding the channel side slopes with a grass mixture and providing landscaping as soon as possible after construction. The composite channel "n" value used in the 1978 design to account for "some vegetation and landscaping within the channel" was 0.03. As evidenced by the analyses of the January and March 1995 storm events, the composite channel "n" value used in the 1978 design does not exist at this time and in fact the 0.03 "n" value would be extremely difficult to restore and maintain. Vegetation would have to be removed which is very undesirable for many reasons: removing vegetation would have significant impacts to the environment, be very costly, and have numerous regulatory issues. Even if a "n" value of 0.03 could be obtained, the 1 percent flow rate of 9,100 cfs with the standard freeboard would still not be restored. In comparing the 1995 cross sections with the 1978 design cross sections, it was estimated that *approximately 98,000 cubic yards of sediment has deposited along the channel from* Route 237 to Highway 101.

The sediment and vegetation combine to produce approximately a 60 percent reduction in channel capacity. The existing 1 percent flow rate and the composite channel "n" values determined to represent todays channel condition were used in the hydraulic model. The resulting water surface elevation from Route 237 to Highway 101 either exceeds the top of levee or encroaches into the freeboard. This shows that the 1 percent flood capacity is not provided at this time.

PROJECT DESCRIPTION

This study was investigated as an interim project to remain in place for possibly the next 2 to 4 years. It will be followed by a comprehensive multiyear planning study. For the study, a special project team was assembled to investigate options to restore the 1 percent flood capacity. Because of a restriction located approximately 28,000 feet upstream of Highway 101 in a box culvert under San Tomas Expressway, only 7,550 cfs will exist downstream of Highway 101 during a 1 percent storm event. This is less than the ultimate 1 percent design flow rate of 9,100 cfs. The 7,550 cfs was used in the study since the restriction will not be resolved prior to the 2 to 4 year length of this project. The specific objective established by the special project team was that the San Tomas Aquino Creek between Route 237 and Highway 101 must be sufficiently adequate at the beginning of the 1995-96 flood season to carry the existing 1 percent flow rate with at least 1.5 feet of freeboard for possibly the next 2 to 4 years. The existing capacity of the channel, with 1.5 feet of freeboard, is shown in Table 1.

TABLE 1
Reach Location—1995 Existing Capacity

Reach Location	1995 Existing Capacity With 1.5 Feet of Freeboard
Highway 237 to Tasman Road	3,800 cfs
Tasman Road to Mission College Boulevard	3,500 cfs
Mission College Boulevard to Highway 101	5,000 cfs

Investigation of the channel from Route 237 to Highway 101 was broken down into three reaches. Reach 1 is defined from Route 237 to Tasman Drive. Reach 2 is defined from Tasman Drive to Mission College Boulevard. Reach 3 is defined from Mission College Boulevard to Highway 101. Figure 4 shows a map delineating the reaches. Figure 5 shows the typical sections as designed and constructed in 1978.

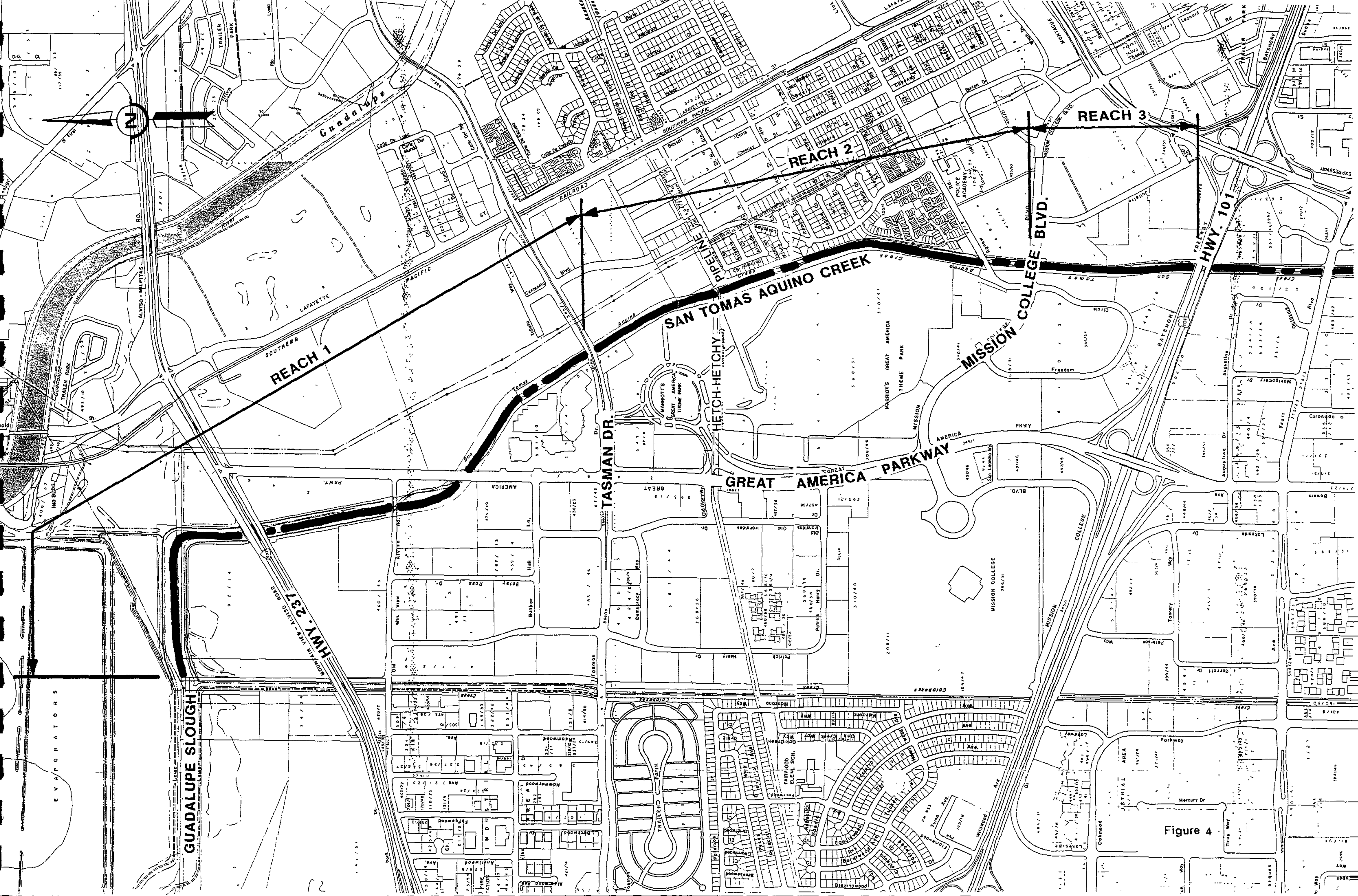
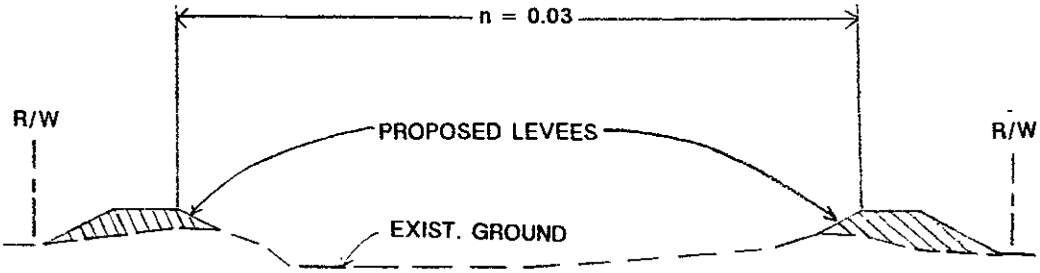

N
REACH 1
REACH 2
REACH 3
SAN TOMAS AQUINO CREEK
GUADALUPE SLOUGH
HWY. 237
MOUNTAIN VIEW - ALVISO ROAD
TASMAN DR.
HETCH-HETCHY PIPELINE
GREAT AMERICA PARKWAY
MISSION COLLEGE BLVD.
HWY. 101
EVAPORATORS
Guadalupe River
SOUTHERN PACIFIC RAILROAD
LAFAYETTE
ALVISO - MILPITAS RD.
MARRIOTT'S GREAT AMERICA THEME PARK
MISSION COLLEGE
POLICE ACADEMY
BAYSHORE FREEWAY
EXPRESSWAY
TRAILER PARK
Calabazas Creek
FAIRWOOD ELEM. SCH.
INDUSTRIAL AREA
FIRE STATION

Figure 4

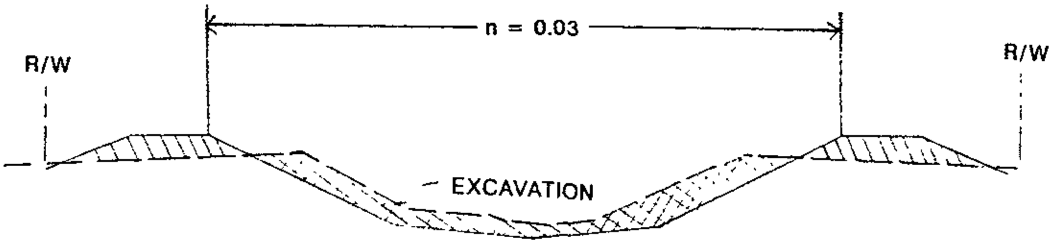
1978 San Tomas Aquino Creek Flood Control Project

Typical Sections

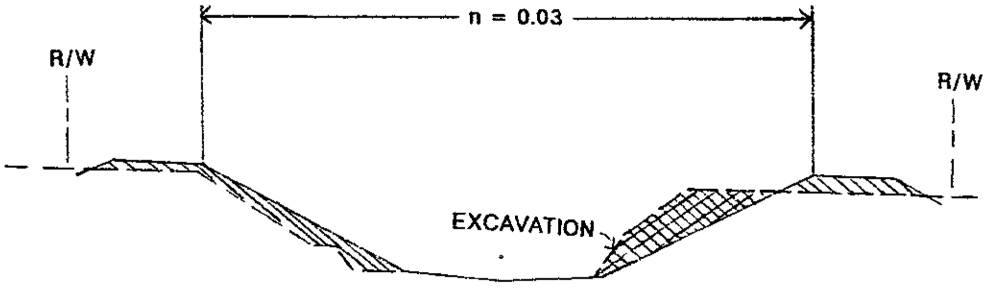
(SECTIONS LOOKING UPSTREAM)



GUADALUPE SLOUGH to TASMAN DRIVE



TASMAN DRIVE to MISSION COLLEGE BOULEVARD



MISSION COLLEGE BOULEVARD to HIGHWAY 101

Figure 5

To regain the 1 percent flood capacity it would be necessary to produce the 1978 project design sections and "n" values by removing all the vegetation and sediment along the channel or to implement remedial design and construction measures. Numerous options were investigated to restore the existing 1 percent flood capacity with 1.5 feet of freeboard. Options addressing sediment removal had several constraints associated with them, as did options addressing vegetation removal. Five options were investigated: (1) The No Project Option (i.e., maintenance only); (2) Add Height to the Levees Above the "As-Built" Levee Elevations; (3) Dredge/Excavate the Channel to Restore the As-Built Channel Sections; (4) Combination of Options 1 and 2; and (5) Combination of Option 1 with Alternate Channel Sides Dredged. Options 1, 2, and 4 were found feasible for the summer of 1995 because they would not involve the lengthy regulatory processes. Option 2, adding height to the levees, would only provide the existing 1 percent flood capacity with 1.5 feet of freeboard for todays channel condition. Option 4 is a combination of Option 2 with the existing maintenance program which together would meet the specific objective identified by the special project team. Options 3 and 5 were found infeasible due to insufficient time to complete the regulatory processes. The no project option consists of continuing the existing maintenance program. A description of the proposed options follows.

Option 1. No Project Option—Continue the Maintenance Program

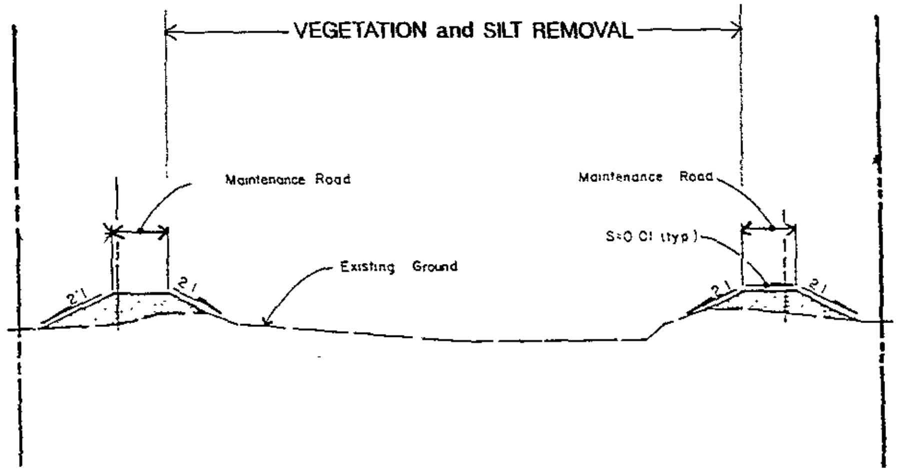
This option would continue the maintenance program for San Tomas Aquino Creek. These activities typically consist of maintaining the channel vegetation, sediment removal, and maintaining the levees to their as-built elevations.

The permissible channel vegetation maintenance activities are shown in Figure 6. In all three of the study reaches, vegetation can be cleared from the inboard levee slopes and channel bottom. Past annual vegetation maintenance activities has included mowing of weeds and grasses on the slopes, removal of woody vegetation on the channel bottom, and removal of non-native vegetation on the slopes and channel bottom. Woody growth on the slopes and herbaceous vegetation on the channel bottom has typically not been removed. Channel bottom vegetation is typically removed during sediment dredging activities. This summer, maintenance activities would include removal of all woody growth on the slopes. Annual maintenance activities including mowing of weeds and grasses, removal of all woody vegetation, and spraying of herbicides would continue. These activities do not require a Corps of Engineers (Corps) permit and comply with the 1990 California Department of Fish and Game (CDFG) Memorandum of Understanding for Routine Maintenance Activities in Improved Channels. The cost for channel vegetation maintenance is estimated to be $25,000 a year. The channel vegetation maintenance program would ensure that the vegetation in the channel would not excessively increase and further reduce the capacity of the channel.

Typical sediment removal activities are shown in Figure 6. Since 1985, approximately 54,000 cubic yards of sediment has been removed from the three study reaches. This figure is based on sediment removal occurring in 1985, 1988, 1990, and most recently in 1991 at various locations. This activity has not occurred since 1991. Until a new Corps 404 permit is obtained, routine sediment removal cannot continue. Based on the 1995 cross section data, it was estimated that approximately 98,000 cubic yards of sediment currently exists in the channel. Figure 7 shows that over a period of several years very little of this sediment is deposited upstream of Mission College Boulevard. Most is downstream in reaches experiencing tidal action. This sedimentation pattern is typical of other south bay streams. The fine particles are re-suspended by wind action in the bay and are carried up into the sloughs by the tides. Removing these sediments is more difficult and costly because of the tidal action and wet materials, and never-ending because the tides are the source of material. The cost for removing this sediment is estimated to be $1,470,000.

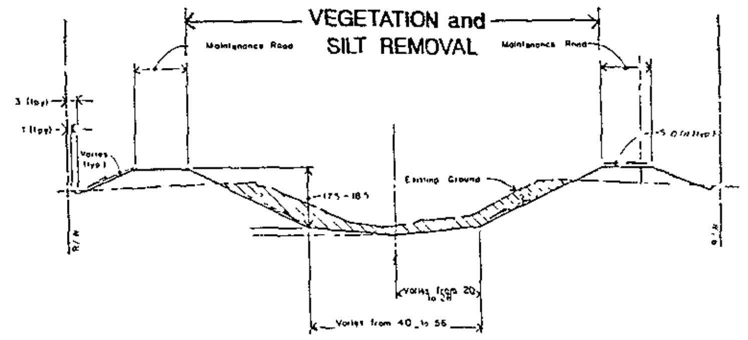
SAN TOMAS AQUINO CREEK MAINTENANCE ACTIVITIES UNDER CDFG MOU (7/90)

Guadalupe Slough toTasman Drive



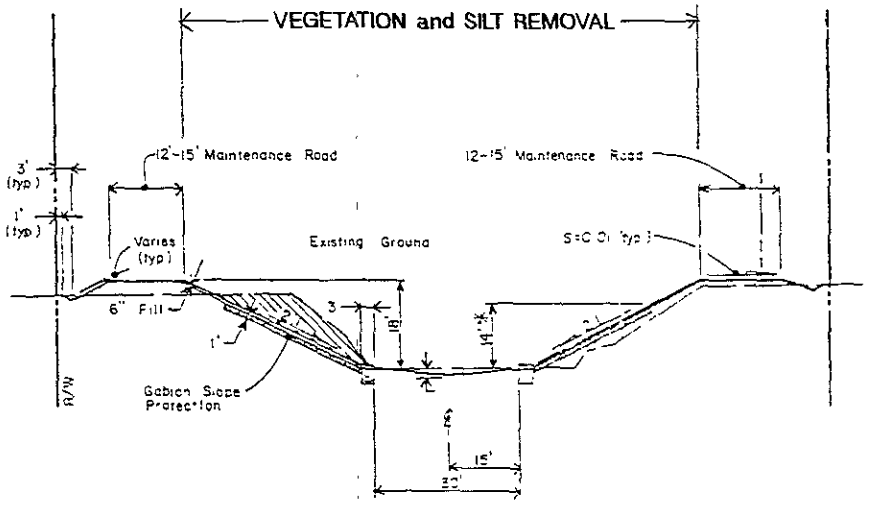
1978 Plan

Tasman Drive to Mission College Boulevard



1978 Plan

Mission College Boulevard to Highway 101



1978 Plan

GUADALUPE SLOUGH—HIGHWAY 101 (A, B, C, D, F, Gs, H, J, Ks, L, N)

Vegetation Removal

Mowing, hand labor, or herbicide spray of weeds, grasses, and aquatic vegetation on channel bottom, overflow channel, floodplain, and bank to maintain design capacity (B).

Removal of woody and herbaceous vegetation with hand labor and tools on channel bottom and bank to maintain design capacity (G).

Removal of trees or branches that are in imminent danger of falling, fallen trees and associated debris to maintain channel design capacity (H).

See also F below.

Silt Removal

Removal of vegetation, silt, debris, and other obstructions within 100 feet of bridges, box culverts, and outfalls to maintain structure's design function (F).

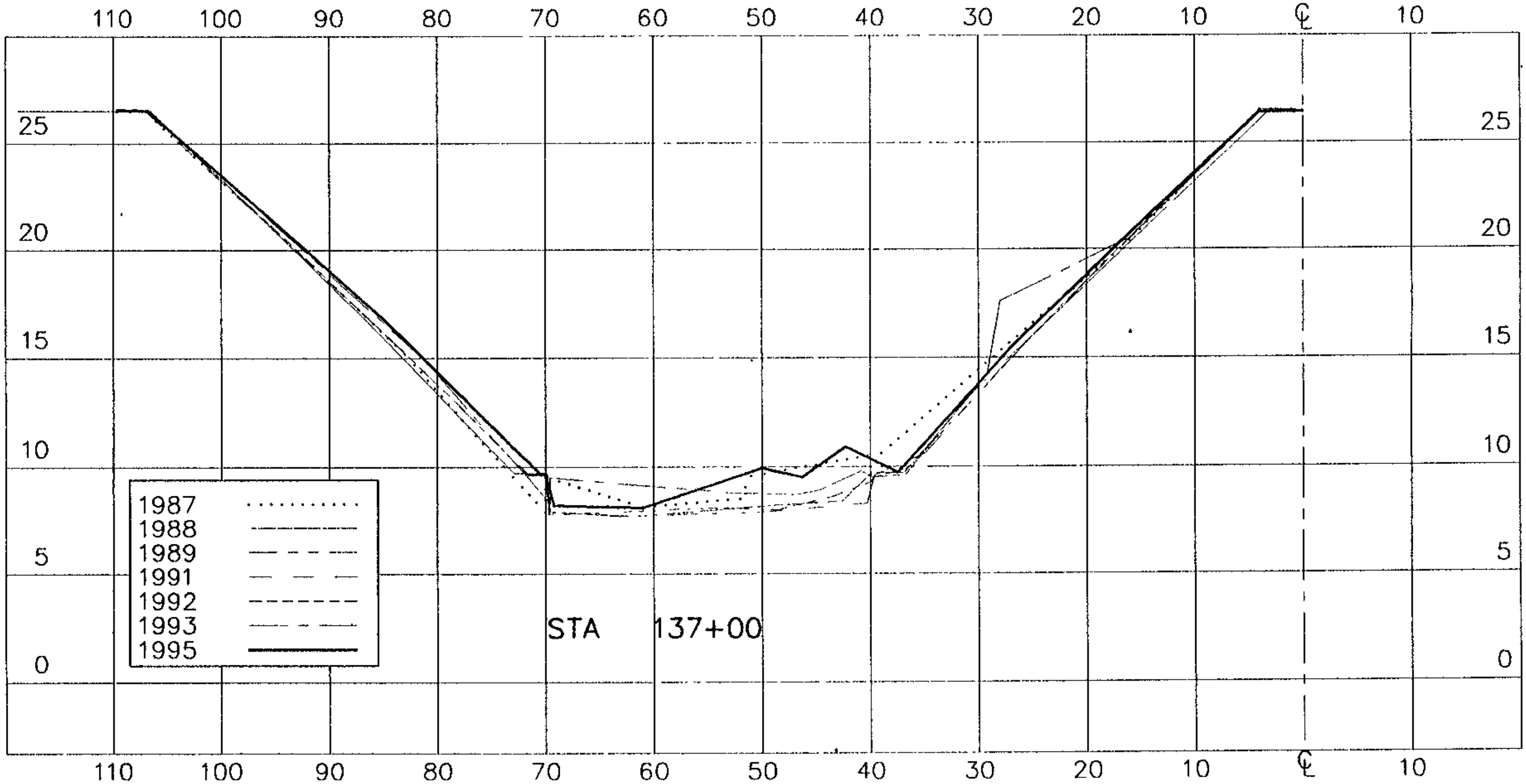
Removal of accumulated sediment, debris, rubbish and other obstructions in channels in alternating years to maintain design capacity (Ks).

Removal of accumulated sediment, debris, rubbish and other obstructions in channels to maintain low flow channel capacity of fish passage or habitat as identified in District environmental document (L).

Erosion Control

Repair of failed rock, gabion, concrete-lined or sacked concrete riprap bank protection to maintain bank stabilization measures previously installed (N).

Figure 6



SAN TOMAS AQUINO CREEK
UPSTREAM MISSION COLLEGE BLVD.

SEDIMENT MONITORING CROSS-SECTION

Figure 7

The maintenance program also includes restoring the levees to their as-built elevations. Periodic restoration of levee elevations is typically required due to anticipated settlement of the levee embankment. This activity has not occurred since the improvements in these reaches were constructed. Levee restoration activities do not require any Corps permits, California Environmental Quality Act (CEQA) documents, or CDFG clearance. Based on the 1995 cross-section data, the levees would need to be restored a maximum of 1.2, 2.6, and 1.4 feet in Reaches 1, 2, and 3, respectively. The cost for levee restoration is estimated to be $230,000.

Restoring the levee heights to the as-built conditions qualifies for a categorical exemption under CEQA as a repair of an existing facility involving negligible or no expansion of use beyond that previously existing. Restoring the levees to as-built conditions will not have significant environmental impacts since the site has been previously disturbed by prior construction activities, and the work area will be limited to the existing top of the levee, an area which is utilized as a maintenance road and is primarily bare.

Continuing the maintenance program will not restore the channel's design condition, especially since sediment removal is currently not allowed. As a result, the no project option would not meet the objective of this study of providing the existing 1 percent flood capacity with 1.5 feet of freeboard. A summary of this option is shown in Table 2.

Option 2. Add Height to the Levees Above the As-Built Levee Elevations

This option would raise the levee height above the as-built levee elevations without changing the base width or impacting the creek side slopes. The raised levee design would maintain a minimum 9-foot top width using soil reinforcement where necessary and would have 4" of aggregate base on all road surfaces, see Figure 8. The cost is estimated to be $1,200,000. The work would extend from Route 237 to Highway 101. No channel vegetation maintenance was included in the analysis. No Corps or CDFG permits would be required. A categorical exemption would be required for CEQA compliance. This option is proposed to be constructed at the same time the levees would be restored to their as-built elevations. The work would take 2 to 3 months and would begin in September and be completed before the rainy season. The levees would need to be raised a maximum of 3.2, 3.7, and 2.4 feet above the as-built elevations in Reaches 1, 2, and 3, respectively. The gain in capacity of this option is shown in Table 3. With this option, all the structure crossings, with the exception of Route 237, would require some form of floodproofing.

Raising the levee height without any vegetation removal causes an overall increase in water surface elevation of about 1 foot downstream of Highway 101. Between the Guadalupe Slough and Highway 101, water levels during floods would be slightly higher with the proposed project than without the project. For the existing 1 percent flood flow rate, the increase in water surface is approximately 1 foot with a 3 to 5 hour duration. Increased water elevation in the creek caused by the proposed project would slightly increase the frequency of ponding in the streets in areas without storm water pumping stations. The water surface upstream of Highway 101 would be 2 feet higher than the design condition. If this option is implemented, the levees would also have to be raised to at least Scott Boulevard. This option would restore the existing 1 percent flood capacity with 1.5 feet of freeboard provided the "n" values determined for todays channel condition do not degrade further.

Option 1

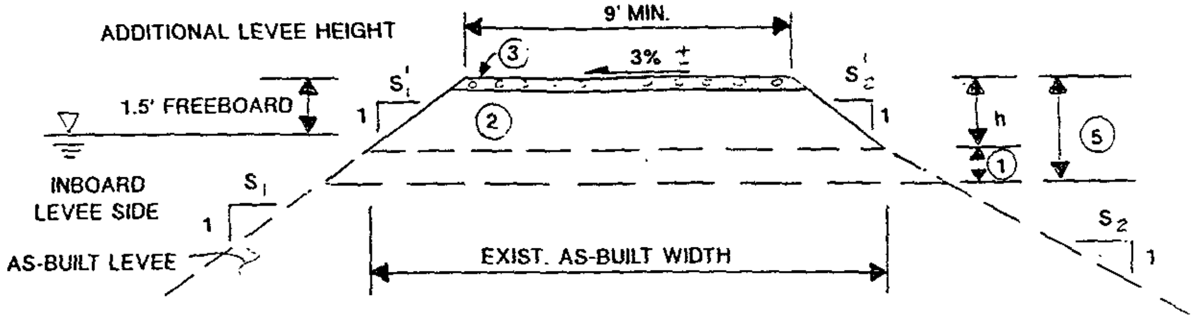
No Project: Continue the Maintenance Program

Reach Location	Required Height To Restore As-Built Levees	Permit Requirements		CEQA Requirements			Capacity with 1.5 feet of freeboard		
		Corps 404	CDFG 1601	EIR	Neg. Dec.	Cat. Exempt.	Exist. (cfs)	Gain (cfs)	Total (cfs)
Highway 237 to Tasman Road	0' to 1.2'	None	None	-	-	Yes	3,800	2,200	6,000
Tasman Road to Mission College Blvd.	0' to 2.6'	None	None	-	-	Yes	3,500	2,000	5,500
Mission College Blvd. to Highway 101	0' to 1.4'	None	None	-	-	Yes	5,000	1,500	6,500

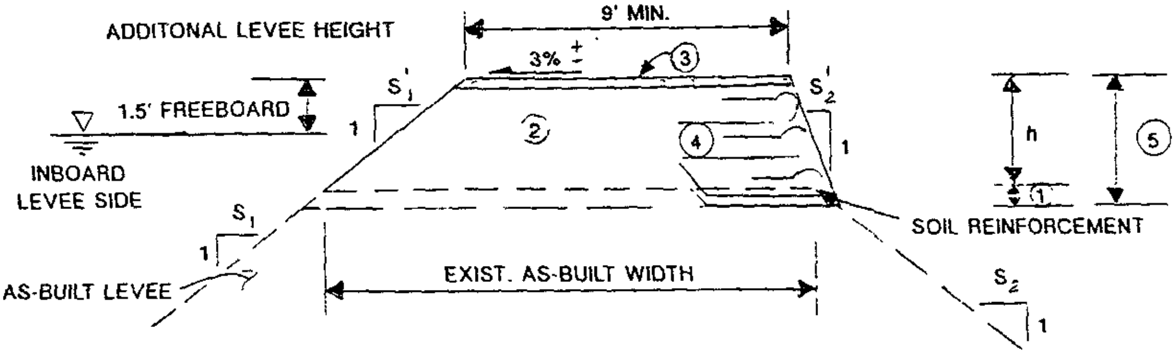
Table 2

Option 2

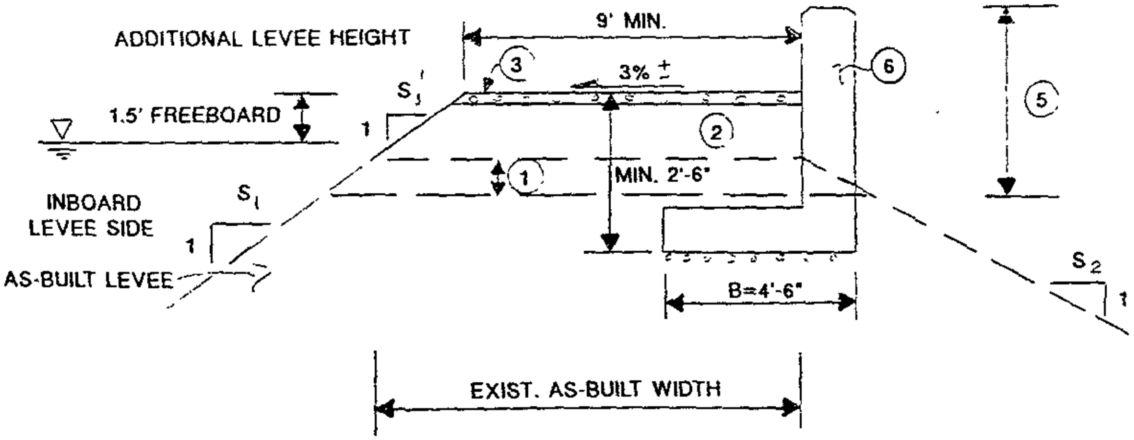
Add Height to the Levees Above the "As-Built" Levee Elevations



NO SOIL REINFORCEMENT



SOIL REINFORCEMENT ALT. 1



SOIL REINFORCEMENT ALT. 2

① LEVEE EMBANKMENT SETTLEMENT
② IMPERVIOUS SANDY CLAY
③ 4" AGGREGATE BASE SURFACING
④ SEMI-IMPERVIOUS, OR STRUCTURAL BACKFILL
⑤ HEIGHT VARIES-SEE TABLES
⑥ PRECAST AT SITE INTO 30' LENGTHS OR CAST IN PLACE

Figure 8

Option 2

Add Height to the Levees Above the "As-Built" Levee Elevations

Reach Location	Required Height Above As-Built Levee	Permit Requirements		CEQA Requirements			Capacity with 1.5 feet of freeboard		
		Corps 404	CDFG 1601	EIR	Neg. Dec.	Cat. Exempt.	As-Built (cfs)	Gain (cfs)	Total (cfs)
Highway 237 to Tasman Road	0' to 3.2'	None	None	-	-	Yes	4,500	3,050	7,550
Tasman Road to Mission College Blvd.	0' to 3.7'	None	None	-	-	Yes	4,500	3,050	7,550
Mission College Blvd. to Highway 101	0' to 2.4'	None	None	-	-	Yes	5,500	2,050	7,550

Table 3

Option 3. Dredge/Excavate the Channel to Restore the As-Built Channel Sections

This alternative would restore the channel back to the as-built channel sections by removing the sediment and vegetation that has developed along the channel bottom. The work would extend from Route 237 to Highway 101. Based on the 1995 cross section data, it was estimated that there is approximately 98,000 cubic yards of sediment in the channel. The cost for removing this sediment is estimated to be $1,470,000. Implementing this option may have significant temporary impacts to the environment. Permits would be required from the Corps and the CDFG. An Environmental Impact Report (EIR) or Negative Declaration would also have to be prepared to meet CEQA requirements. The CEQA document and the Corps' 404 permit would take 1 to 1.5 years to complete. The regulatory requirements would not allow construction to begin before the 1995-96 flood season. The existing 1 percent flood capacity with 1.5 feet of freeboard would only be restored in Reach 1. In Reaches 2 and 3 the water surface exceeds the existing levee by a maximum of 1.4 and 1 feet respectively. For these reasons, this option does not meet the specific objective of restoring the existing 1 percent flood capacity with 1.5 feet of freeboard before next winter. However, it should be considered as part of the long-term solution. The gain in capacity and requirements of this option are shown in Table 4.

Option 4. Combination of Options 1 and 2

This plan would combine Option 2 with the maintenance program. This combination of maintenance activities and construction measures would fulfill the objective of containing the existing 1 percent flow rate with 1.5 feet of freeboard before next winter. Raising the levees is the only option that can be completed in time to contain the existing 1 percent flow rate with 1.5 feet of freeboard. To insure the "n" values determined for todays channel condition do not degrade further some type of vegetation control would need to be implemented. The only vegetation control feasible for the summer of 1995 that would not involve the lengthy regulatory processes is the channel vegetation maintenance program. The maintenance program would help insure that the vegetation in the channel would not excessively increase and further reduce the capacity of the channel. The work would extend from Route 237 to Highway 101. With the maintenance program included, the maximum levee heights needed become 1.3, 1.9, and 1 feet, respectively for Reaches 1, 2, and 3. This is less than half of the levee heights required in Option 2. Some form of floodproofing would be required at Agnew Road and Mission College Boulevard. As noted in Option 2, increased water elevation in the creek caused by the project would slightly increase the frequency of ponding in the streets in areas without storm water pumping stations. For this option, a categorical exemption would be required for CEQA compliance. The estimated cost of this option is $565,000. The gain in capacity and requirements of this option are shown in Table 5.

Adding height to the levees above the as-built elevations qualifies for categorical exemption under CEQA as a minor alteration of an existing facility involving negligible expansion of use beyond that previously existing. Raising the levees will not have significant environmental impacts since the work will be confined to the bare top of the restored levee and will not affect the creek side slopes. Where levee raising will be visible from adjacent residential areas (most of the adjacent land is industrial), the outward facing slope will be treated as necessary to provide an aesthetic surface. Surveys for burrowing owls will be conducted prior to construction. If any active burrowing owls nests are found, construction will be modified to avoid disturbing the birds. If necessary, construction in the vicinity of active burrowing owl nests will be delayed until the birds can be moved.

Option 3

Dredge\Excavate the Channel to Restore the "As-Built" Channel Sections

Reach Location	Maximum Height Water Surface Exceeds Existing Levees	Permit Requirements		CEQA Requirements			Capacity with 1.5 feet of freeboard		
		Corps 404	CDFG 1601	EIR	Neg. Dec.	Cat. Exempt.	Exist. (cfs)	Gain (cfs)	Total (cfs)
Highway 237 to Tasman Road	0	Yes	Yes	Possible	Possible	-	3,800	3,750	7,550
Tasman Road to Mission College Blvd.	1.4'	Yes	Yes	Possible	Possible	-	3,500	2,500	6,000
Mission College Blvd. to Highway 101	1.0'	Yes	Yes	Possible	Possible	-	5,000	1,500	6,500

Table 4

Option 4

Combination of Options 1 and 2

Reach Location	Required Height Above As-Built Levee	Permit Requirements		CEQA Requirements			Capacity with 1.5 feet of freeboard		
		Corps 404	CDFG 1601	EIR	Neg. Dec.	Cat. Exempt.	Exist. (cfs)	Gain (cfs)	Total (cfs)
Highway 237 to Tasman Road	0' to 1.3'	None	None	-	-	Yes	3,800	3,750	7,550
Tasman Road to Mission College Blvd.	0' to 1.9'	None	None	-	-	Yes	3,500	4,050	7,550
Mission College Blvd. to Highway 101	0' to 1.0'	None	None	-	-	Yes	5,000	2,550	7,550

Table 5

Option 5. Combination of Option 1 with Alternate Channel Sides Dredged

This plan would combine the maintenance program with alternating the sides sediment and vegetation would be removed from half the channel bottom in alternate years. This work would extend from Route 237 to Highway 101. Channel vegetation maintenance would continue. Sediment removal would be approximately one half of the estimated 98,000 cubic yards. The levees would only need to be raised to the as-built levee elevations. This would be a maximum height of 1.2, 2.6, and 1.4 feet in Reaches 1, 2, and 3, respectively. A CDFG and Corps 404 permit, as well as, a possible EIR or Negative Declaration for CEQA compliance would be required. The Corps 404 permit would take the longest to obtain and, at best, it is estimated that the minimum length of time it would take to obtain the permit is 6 months. This option would restore the existing 1 percent flood capacity with 1.5 feet of freeboard but not before next winter. This option, however, should be considered as part of the long-term solution. The cost is estimated to be $990,000. The gain in capacity and requirements of this option are shown in Table 6.

PROJECT SELECTION

The selected project is Option 4, raising the levees and continuing the maintenance program. Of the five options investigated, as shown in Table 7, Option 4 is the only one that would meet the specific objective identified by the special project team: to insure that the San Tomas Aquino Creek between Route 237 and Highway 101 is sufficiently adequate at the beginning of the 1995-96 flood season to carry the existing 1 percent flow rate with at least 1.5 feet of freeboard for possibly the next 2 to 4 years. The selection of this option is based on many factors including design, maintenance access, regulatory requirements, timing of implementation, and community acceptance.

PROJECT COST, FINANCING, AND SCHEDULE

The estimated total cost of the recommended project is $565,000 and includes all cost for maintenance, engineering, construction, inspection, and administration.

The proposed measures will be financed through two sources of existing revenue: (1) the North Central Zone's allocation of the 1 percent property tax, and (2) the North Central Flood Control Zone benefit assessments.

The estimated maintenance and construction schedule is such that the project will be completed before next winter. Vegetation clearing and construction are expected to begin in September.

CONCLUSIONS AND RECOMMENDATIONS

The San Tomas Aquino Creek between Route 237 and Highway 101 was most recently constructed in 1978 to carry the 1 percent flow rate of 9,100 cfs with standard freeboard. Based on data collected from the January and March 1995 storm events, a hydraulic analysis showed that the 1 percent flood capacity was not provided at this time and the surrounding areas would be subject to potential flooding. There is approximately a 60 percent reduction in channel capacity. Both sediment deposition and vegetation growth have been identified as the main causes of reduction in channel capacity.

The proposed project would insure that the existing 1 percent flood capacity would be provided with at least 1.5 feet of freeboard. The project would cost approximately $565,000 and would be financed from two existing revenue sources.

When the risk of potential flood damages is considered it is apparent that the proposed project is required to restore the existing 1 percent design capacity on the San Tomas Aquino Creek from Route 237 to Highway 101. It is therefore recommended that the measures proposed in this report be approved.

Option 5

Combination of Option 1 with Alternate Channel Sides Dredged

Reach Location	Maximum Height Water Surface Exceeds As-Built Levees	Permit Requirements		CEQA Requirements			Capacity with 1.5 feet of freeboard		
		Corps 404	CDFG 1601	EIR	Neg. Dec.	Cat. Exempt.	Exist. (cfs)	Gain (cfs)	Total (cfs)
Highway 237 to Tasman Road	-	Yes	Yes	Possible	Possible	-	3,800	>3,750	>7,550
Tasman Road to Mission College Blvd.	-	Yes	Yes	Possible	Possible	-	3,500	>4,050	>7,550
Mission College Blvd. to Highway 101	-	Yes	Yes	Possible	Possible	-	5,000	>2,550	>7,550

Table 6

Summary of Objective Criteria

Project Objective: "that the San Tomas Aquino Creek between Highway 237 and Highway 101 must be sufficiently adequate at the beginning of the 1995-96 flood season to carry the existing 1% flow rate with at least 1.5 feet of freeboard for the next 2-4 years"

Options	1% Capacity (7,550 cfs)	1.5' of Freeboard	Time to Implement	1-4 yr Objective Met	1995 Costs	Approx. 4-year Cost
1. No Project (Continue the Maintenance Program: Vegetation Control, Levee Restoration)	No	No (1.2'-2.6' max ht. req'd to restore AB elevations)	1-2 months	No	Veg. $25,000 Sed. $1,470,000 Lev. Rest. $230,000	Veg. $100,000 Sed. $1,920,000
2. Add Height to the Levees Above the "As-Built" Levee Elevations	Yes	Yes (3.7' max. ht. req'd above AB elevations)	2-3 months	Yes (Adequate for 1 yr only)	$1,200,000	$1,400,000
3. Dredge/Excavate the Channel to Restore the "As-Built" Channel Sections	Yes	No (1.4' max. ht. wat. surf. exceeds exist. levees)	Approx. 1.5 yrs	No	$1,470,000	$1,920,000
4. Combination of Options 1 and 2	Yes	Yes (1.9' max. ht. above AB req'd)	2-3 months	Yes	$565,000	$640,000
5. Combination of Option 1 with Alternate Channel Sides Dredged	Yes	Yes (1.2'-2.6' max. ht. req'd to restore AB elevations)	Approx. 1.5 yrs	No	$990,000	$2,100,000
			6 months w/emerg. permit	No		

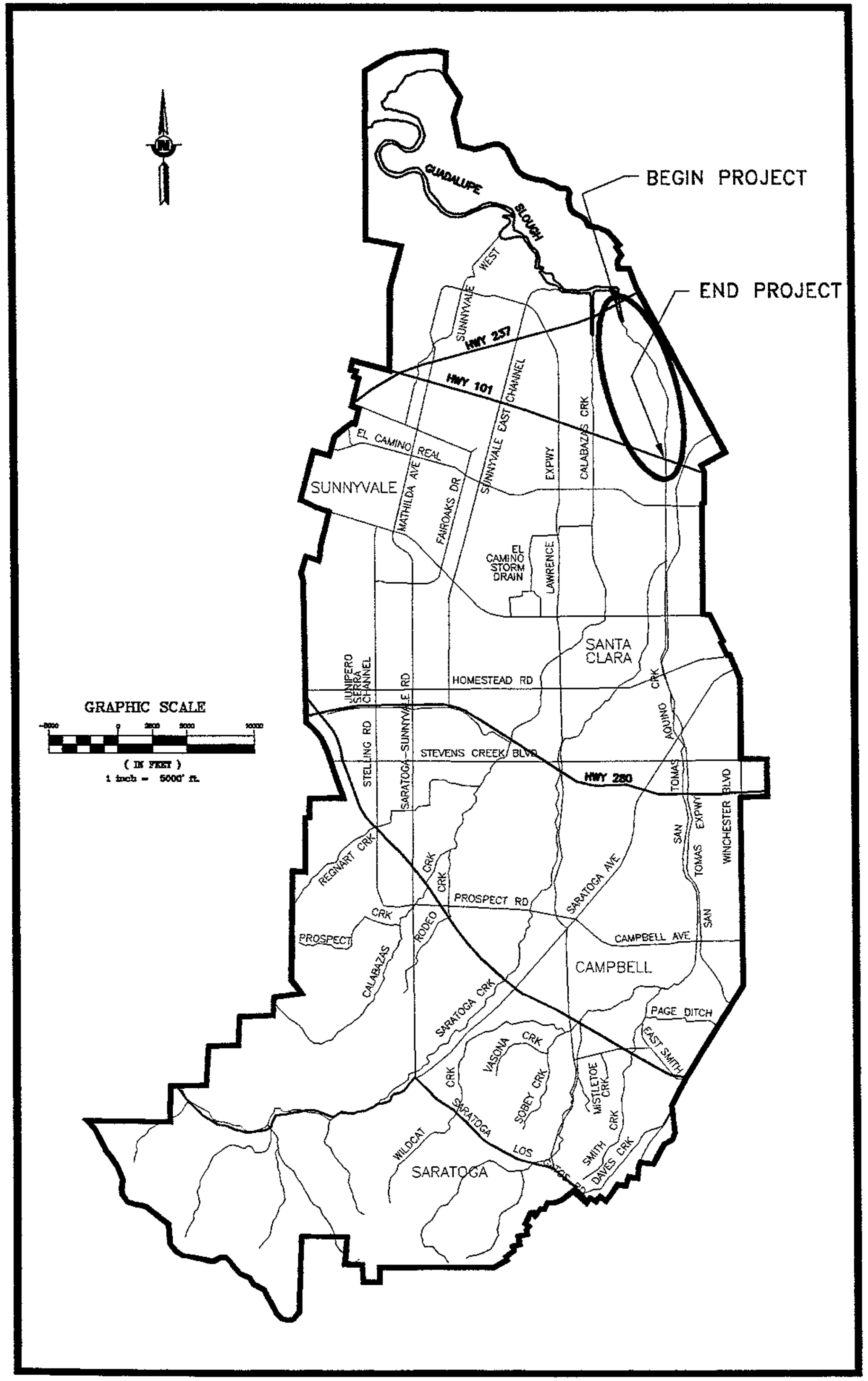
Table 7

SUMMARY OF CONCEPTUAL OPTIONS

Project Objective: "that the San Tomas Aquino Creek between Highway 237 and Highway 101 must be sufficiently adequate at the beginning of the 1995-96 flood season to carry the existing 1% flow rate with at least 1.5 feet of freeboard for the next 2-4 years"

OPTIONS		ISSUES OF CONCERN				
OPTION	DESCRIPTION	FLOODING	REGULATORY REQUIREMENTS	ADVERSE IMPACTS	REMARKS	1995 COST
1. No Project	Continue existing maintenance program consisting of limited vegetation control and restoring "As-Built" levee elevations.	Protection to the 100-year flood no longer provided.	Categorical Exemption required to restore the AB levee elevations.	Surrounding areas subject to potential flooding.	Does not meet objective.	veg. $25,000/year $230,000 levee restoration cost
2. Add Height to the Levees Above the "As-Built" Condition	Raise the levee height above the "As-Built" condition.	Restores the 1% flood capacity with 1.5' of freeboard for the current channel condition.	Categorical Exemption required.		Meets objective for current condition.	$1,200,000
3. Dredging/Excavating the Channel to Restore the "As-Built" Condition	Restore the channel back to the "As-Built" condition.	Restores the 1% flood capacity but without freeboard.	Corps 404 permit required. CDFG 1601 permit required. Possible EIR or Negative Declaration required for CEQA.	Significant impacts to the environment. Insufficient time to complete the regulatory processes before next winter.	Does not meet objective.	$1,470,000
4. Combination of Option 1 & 2	Combines option 2 with the existing maintenance program.	Restores the 1% flood capacity with 1.5' of freeboard.	Categorical Exemption required.		Meets objective.	$565,000
5. Combination of Option 1 with Alternate Channel Sides Dredged	Combines option 1 with sediment and vegetation removal from half the channel bottom in alternate years.	Restores the 1% flood capacity with 1.5' of freeboard.	Corps 404 permit required. CDFG 1601 permit required Possible EIR or Negative Declaration required for CEQA.	Insufficient time to complete the regulatory processes before next winter.	Does not meet objective.	$990,000

Table 8



MAP AND GENERAL PLAN

FOR

SAN TOMAS AQUINO CREEK

FROM

ROUTE 237 TO HIGHWAY 101

Santa Clara Valley Water District

NORTH CENTRAL FLOOD CONTROL ZONE **PROJECT NO. 2019**

INDEX

SHEET NO.	DESCRIPTION
1	LOCATION MAP AND TITLE SHEET
2-6	PROFILE

PROJECT APPROVAL:

FLOOD CONTROL MANAGER

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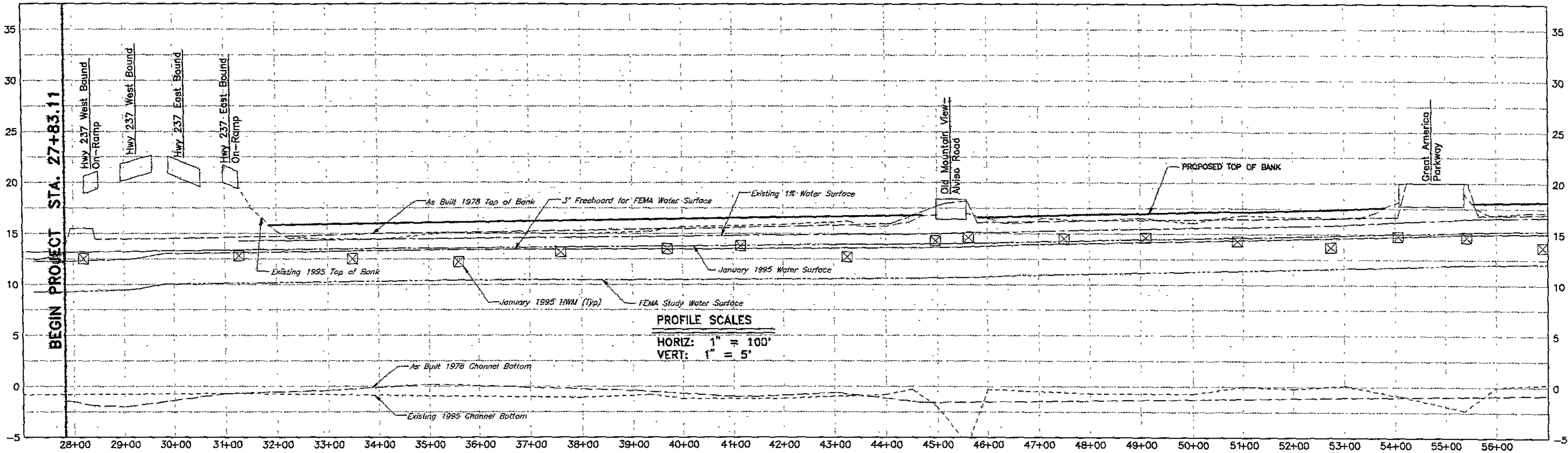

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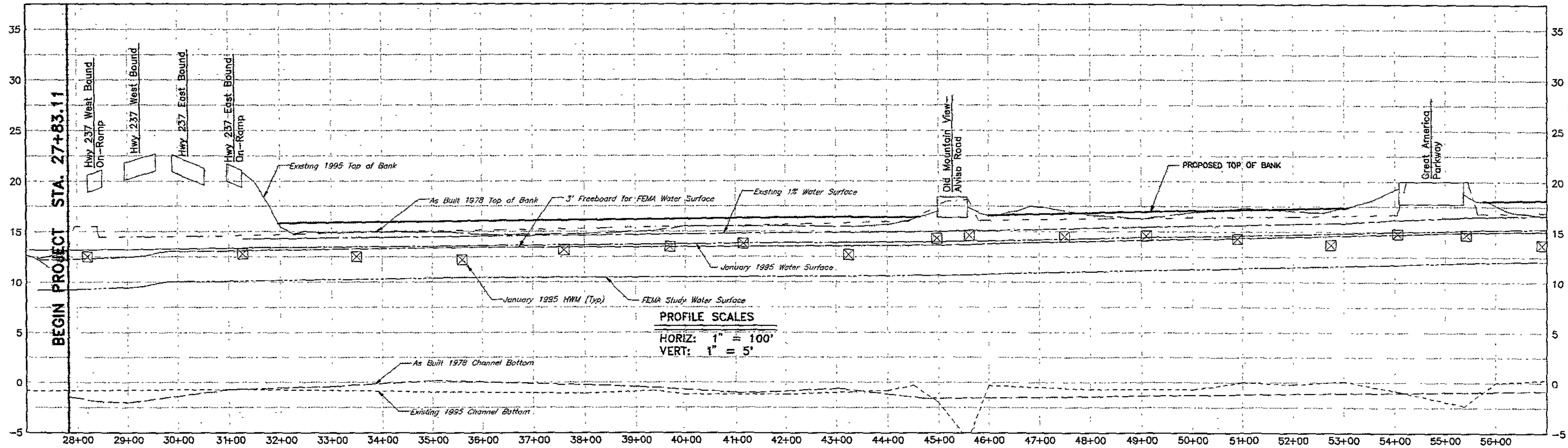

REV	DESCRIPTION	DATE	APPR

REFERENCE INFORMATION AND NOTES

ABBREVIATIONS:
EL. = Elevation
G.B. = Grade Break
HWM = High Water Mark
STA. = Station

RECHELLE R. BRAVO
NO. 52106
EXP. 12/31/98
CIVIL

RANDALL R. TALLEY
NO. 25093
EXP. 12/31/97
CIVIL

DATE
8/14/95
DESIGN
R BRAVO
DRAWN
S. LEACH
CHECKED
R. BRAVO

Santa Clara Valley Water District

ENGINEERING CERTIFICATION

PROJECT ENGINEER R.C.E. NO 52106

ENGINEERING APPROVAL

DIVISION ENGINEER R.C.E. NO 25093

SAN TOMAS AQUINO CRK
ROUTE 237 TO HWY 101
PROFILE

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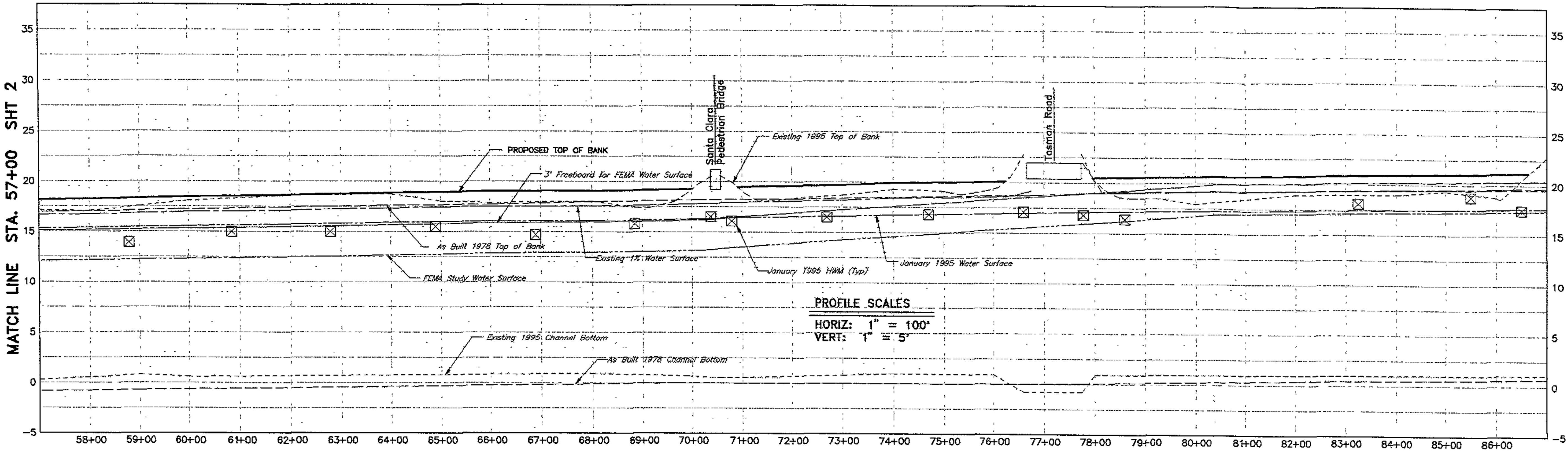

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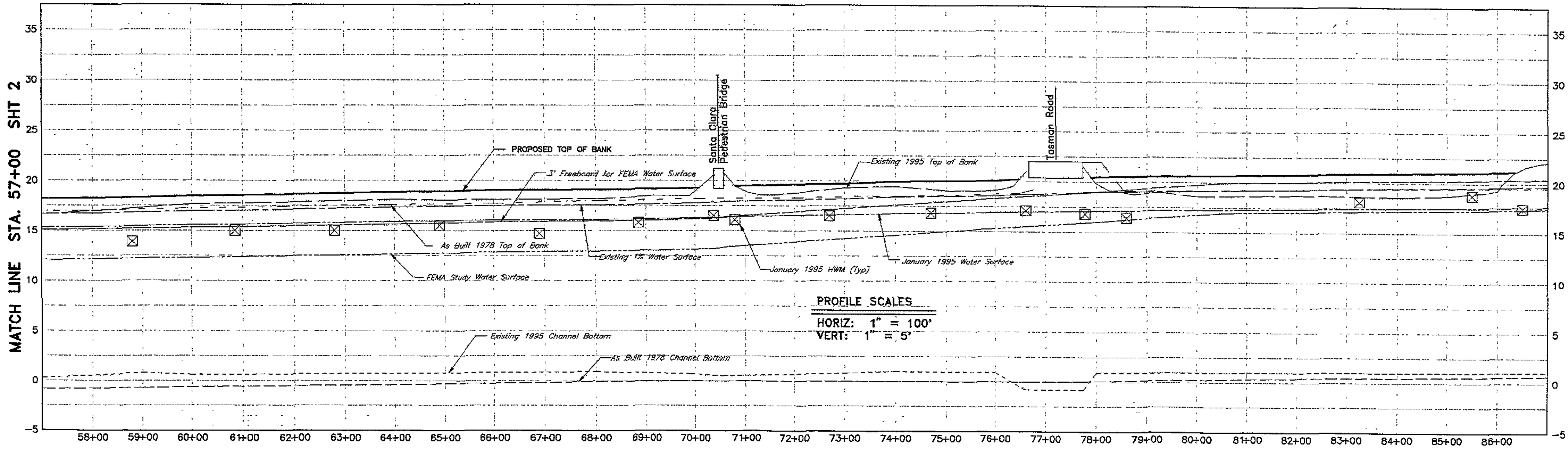

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REGISTERED PROFESSIONAL ENGINEER
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NO. 52106
EXP. 12/31/98
CIVIL
STATE OF CALIFORNIA

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RANDALL R. TALLEY
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ENGINEERING CERTIFICATION	ENGINEERING APPROVAL
PROJECT ENGINEER R.C.E. NO. 52106	DIVISION ENGINEER R.C.E. NO. 25093

SAN TOMAS AQUINO CRK
ROUTE 237 TO HWY 101
PROFILE

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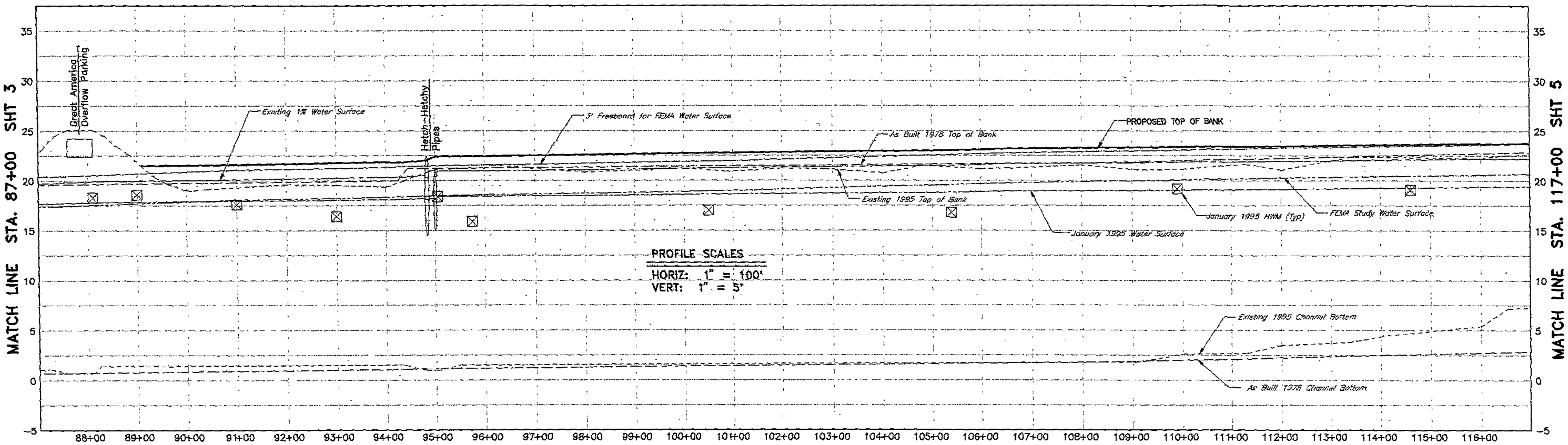

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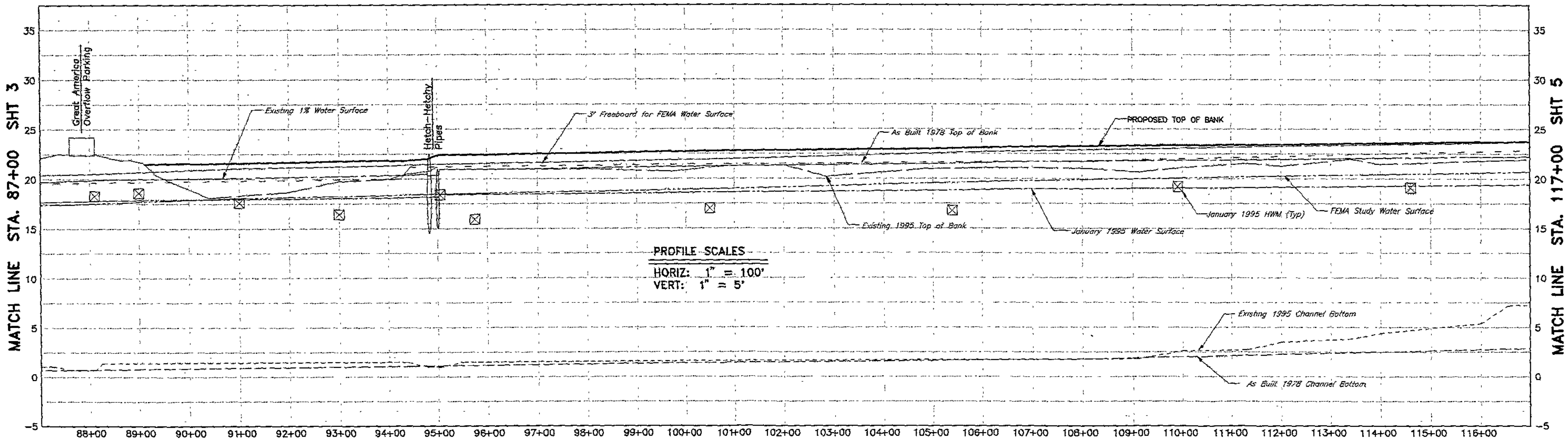

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Santa Clara Valley Water District

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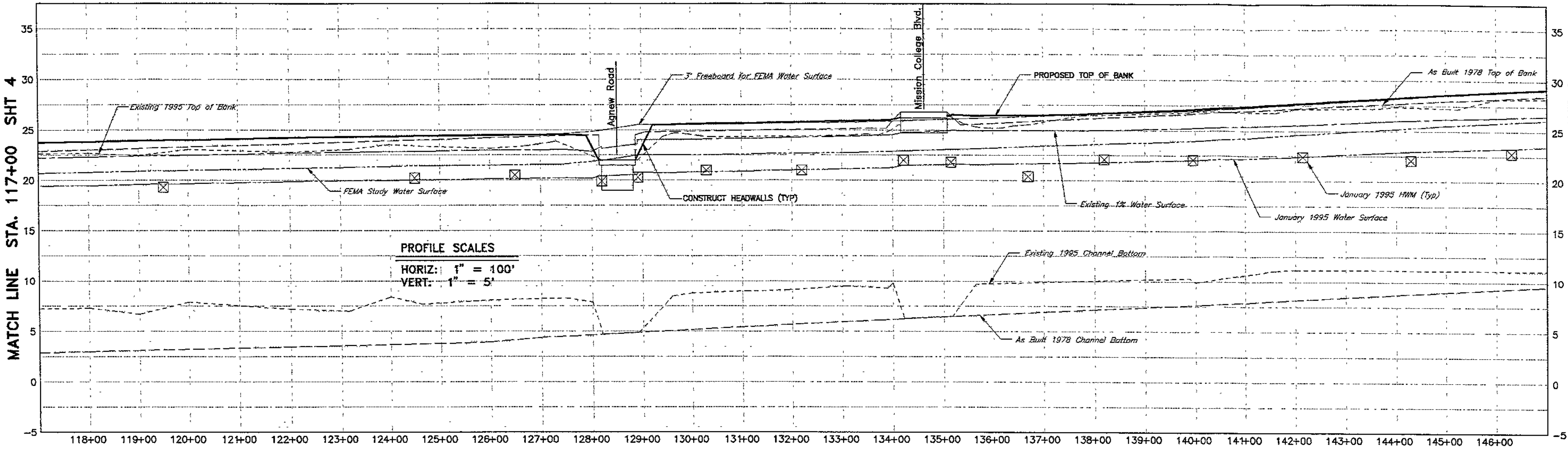

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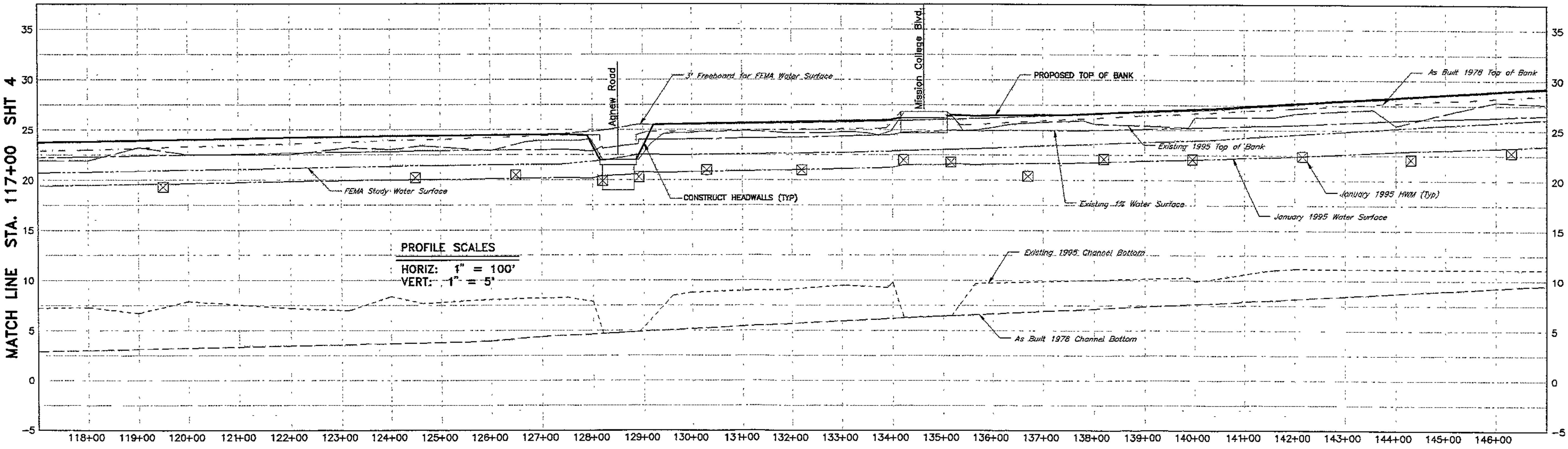

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DIVISION ENGINEER R.C.E. NO 25093

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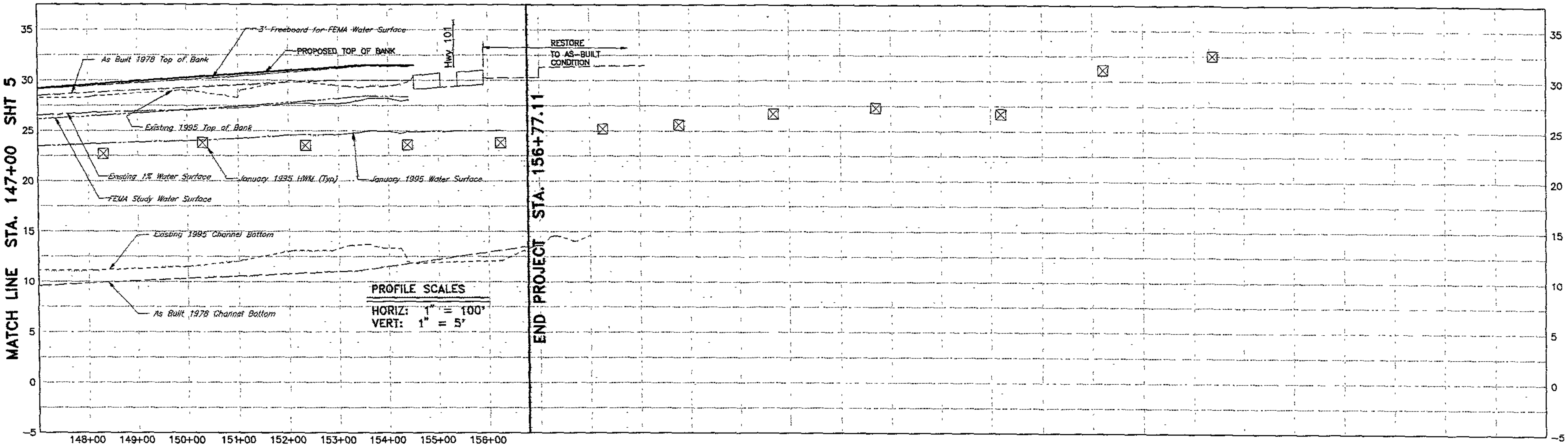

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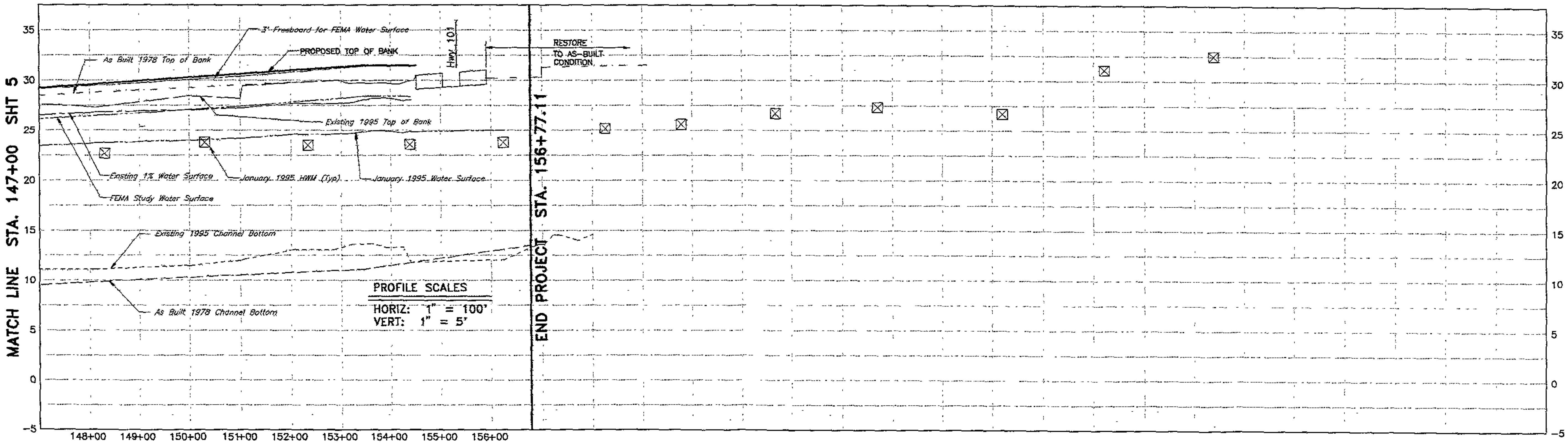

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HWM = High Water Mark
STA. = Station

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EXP. 12/31/98
CIVIL

RANDALL R. TALLEY
NO. 25093
EXP. 12/31/97
CIVIL

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8/14/95
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Santa Clara Valley Water District

ENGINEERING CERTIFICATION

PROJECT ENGINEER R.C.E. NO 52108

ENGINEERING APPROVAL

DIVISION ENGINEER R.C.E. NO 25093

SAN TOMAS AQUINO CRK
ROUTE 237 TO HWY 101
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APPENDIX A

(ADDENDUM)

ENVIRONMENTAL REVIEW

CATEGORICAL EXEMPTION

Santa Clara Valley Water District

MEMORANDUM

FC 14A (06-28-93)

To: Randy Talley
From: Cindy Roessler
Subject: San Tomas Aquino Creek - Guadalupe Slough to Highway 101
Date: September 5, 1995

SUMMARY: Raising the levees and continuation of the existing vegetation clearing maintenance program is proposed to restore the 1 percent flow capacity to San Tomas Aquino Creek between Route 237 and Highway 101. Implementation of this work will begin in the summer of 1995 to provide protection prior to the start of winter rains. The vegetation removal activities could continue for 2 to 4 years until a more permanent solution is designed and implemented. The currently proposed activities are either consistent with the 1978 Negative Declaration, or are minor activities with no potential for environmental effect, and therefore are exempt from additional review or are categorically exempt under the California Environmental Quality Act (CEQA). Subsequent long term solutions will be reviewed in the future under CEQA, as necessary.

As further described in the San Tomas Aquino Creek Engineer's Report (Route 237 to Highway 101, August 1995), the project will consist of restoring the 1 percent flow capacity of 7,550 cubic feet per second with 1.5 feet of freeboard to San Tomas Aquino Creek between Route 237 and Highway 101. This is an interim project to provide flood protection in the next 2 to 4 years while a comprehensive solution is more thoroughly investigated. A specific goal of the interim project is to provide this level of flood protection prior to the beginning of the 1995-96 flood season.

Emergent aquatic vegetation in the channel of this section of San Tomas Aquino Creek consists primarily of cattails (*Typha latifolia*), smartweed (*Polygonum* sp.) and waterprimrose (*Ludwigia peploides*). Downstream of Tasman Drive, bulrush (*Scirpus* spp.) covers the majority of the channel bottom. The inside slopes of the levee banks are usually barren on the top half, with annual grasses and herbaceous plants such as castor bean (*Ricinus communis*), and cocklebur (*Xanthium strumarium*). There is no woody vegetation with the exception of approximately 5 widely scattered small walnut (*Juglans californica*), buckeye (*Aesculus californica*), and blue elderberry (*Sambucus mexicana*) trees (less than four feet in height) and an occasional clump of coyote brush (*Baccharis pilularis*).

The different activities proposed under the San Tomas Aquino Creek project are described below with an evaluation of their status under CEQA.

Restore levee heights to the "as-built" condition. A flood control project was designed and a Negative Declaration prepared under CEQA in 1978 for San Tomas Aquino Creek between the Highway 101 and the Calabazas Retarding Basin[1]. The project was constructed in 1980, and consisted primarily of raising or relocating existing levees, constructing an excavated channel, and widening portions of the channel. As a result of settling, the existing levees are no longer the same height as originally built. The current project proposes placement of up to 2.6 feet of earthen material on the top of the settled levees to restore them to their original height.

Since the site has been previously disturbed by construction activities, and the work area is very limited, there is no potential for significant environmental impacts. All work will be confined to the top and upper slope of the existing levees. The flat top of the levee is used as a maintenance road and is either bare or sparsely vegetated with annual grasses and weedy forbs, and thus does not provide any valuable wildlife habitat. Recent surveys have determined that there are no active burrowing owl nests on the levees within the work area. This activity will not result in the filling of wetlands, and will not remove any mature trees. The site does not contain any hazardous materials nor do the existing levees contain any cultural resources. The project is designed as an engineered facility and will not introduce any new geological hazards. Standard techniques will be used to protect water quality during construction such as excluding equipment from sensitive areas and stabilizing bare slopes to prevent erosion.

Land uses adjacent to the levees are primarily industrial and commercial with some residential areas occurring on the east bank between Agnew Road and the crosssing of the Hetch-Hetchy pipeline. The residential areas are set back from the work area or are generally screened from the levees by fences and landscaping, therefore restoration of the levees to their former height will not result in any new visual or aesthetic impacts. Construction noise and traffic will be temporary (a few days in each location).

Because there is no potential for significant environmental impacts, restoring the levees to the "as-built" conditions qualifies for a Class 1 categorical exemption under CEQA as a repair of an existing facility involving negligible or no expansion of use beyond that previously existing.

---

[1] Santa Clara Valley Water District, February 1978, San Tomas Aquino Creek Planning Study, Consisting of the Final Engineer's Report.

under CEQA as a repair of an existing facility involving negligible or no expansion of use beyond that previously existing.

Add height to levees above the "as-built" condition. Up to 2 feet of earthen material would be added to the top of the levees above the as-built conditions. To provide adequate access for maintenance vehicles, Geoweb, hilfiker wire, or similar soil reinforcement structures will be used to maintain a minimum levee top width of 9 feet without changing the base width or widening the inside slopes. The increase in levee height would be up to 1.0 feet from Mission College Boulevard to Highway 101 (Reach 1), 1.9 feet from Tasman Road to Mission College Road (Reach 2), and 1.3 feet from Highway 237 to Tasman Road (Reach 3).

All work will be confined to the top of the existing levees. This work will be conducted at the same time and in a similar manner as that described above for the "as-built" heights. As described above, the existing conditions provide negligible vegetation and wildlife habitat, and there is no potential for adverse impacts associated with cultural resources, hazardous materials, geologic hazards, water quality, noise and traffic. Since adjacent residential areas are set back and below or are generally screened from the levees by fences or landscaping, raising the levee height no more than 2 feet will not result in any significant visual or aesthetic impacts.

Adding height to the levees as proposed will not result in any significant environmental impacts. This activity qualifies as a Class 1 categorical exemption under CEQA as a minor alteration of an existing facility involving negligible expansion of use beyond that previously existing. Although the levees will be raised above their existing height, this will not expand the design capacity of the flood control facility. Rather, levee raising has been proposed as a short term measure to restore the design capacity which has been reduced by sedimentation and growth of vegetation in the channel.

Levee raising as proposed does not have the potential for any cumulative impacts. At this time, the levee raising activity will only occur in 1995 as part of the short term project to restore capacity to San Tomas Aquino Creek. The design of any long term project at this location is not currently known, however, if it will result in cumulative impacts, these will be reviewed as required under CEQA at that time.

Vegetation control. The existing vegetation control program will be continued. All vegetation on the slopes will be removed by mowing and herbicide spraying of grasses and herbaceous plants. Aquatic vegetation in the channel bottom will be removed by mowing or spraying as provided for in the Memorandum of Understanding with the California Department of Fish and Game.

> The 1978 Engineer's Report and Negative Declaration did not specifically address maintenance activities of the flood control project, as is the case with many projects designed over 20 years ago. Therefore, vegetation removal as a result of the existing maintenance program has not been specifically reviewed under CEQA. The Water District is currently reviewing all vegetation control activities which are part of our maintenance program and will be preparing a Environmental Impact Report. One of the goals of this future program level environmental review is to evaluate the maintenance requirements of projects such as the San Tomas Aquino Creek flood control project and revise our maintenance practices as necessary to minimize environmental effects. In the meantime, we are continuing to implement vegetation control activities in a manner consistent with a 1990 Memorandum of Understanding with the California Department of Fish and Game.

I have enclosed a Preliminary Environmental Assessment for this project. Please have your Department Manager sign the form, and return a copy of the signed form to me.

cc: B. Goldner, C. Roessler, R. Bravo, J. Ortiz, M. Stone, File, Read

SANTA CLARA VALLEY WATER DISTRICT

PRELIMINARY ENVIRONMENTAL ASSESSMENT

NAME OF PROJECT

San Tomas Aquino Creek - Short-Term Project

LOCATION

San Tomas Aquino Creek from Route 237 to Highway 101

STAFF DETERMINATION

The District's staff, having undertaken and completed a preliminary environmental assessment of this project in accordance with the District's resolution entitled "Adopting District Guidelines Governing Compliance with the California Environmental Quality Act of 1970, as Amended," has concluded that this project does not require further environmental assessment because:

_____ The proposed action does not constitute a project within the meaning of Section 15378.

_____ The project is a Ministerial Project under Section 15268.

_____ The project is an Emergency Project under Section 15269.

_____ The project constitutes a feasibility or planning study under Section 15262.

__x__ The project is Categorically Exempt under Section

Applicable Exemption Class 1, Repair and Minor Alteration of an Existing Facility

_____ The project involves another public agency which constitutes the Lead Agency.

Name of Lead Agency ____________________

Stanley Williams
General Manager

Date: 5 September 1995

By: Stan M Williams

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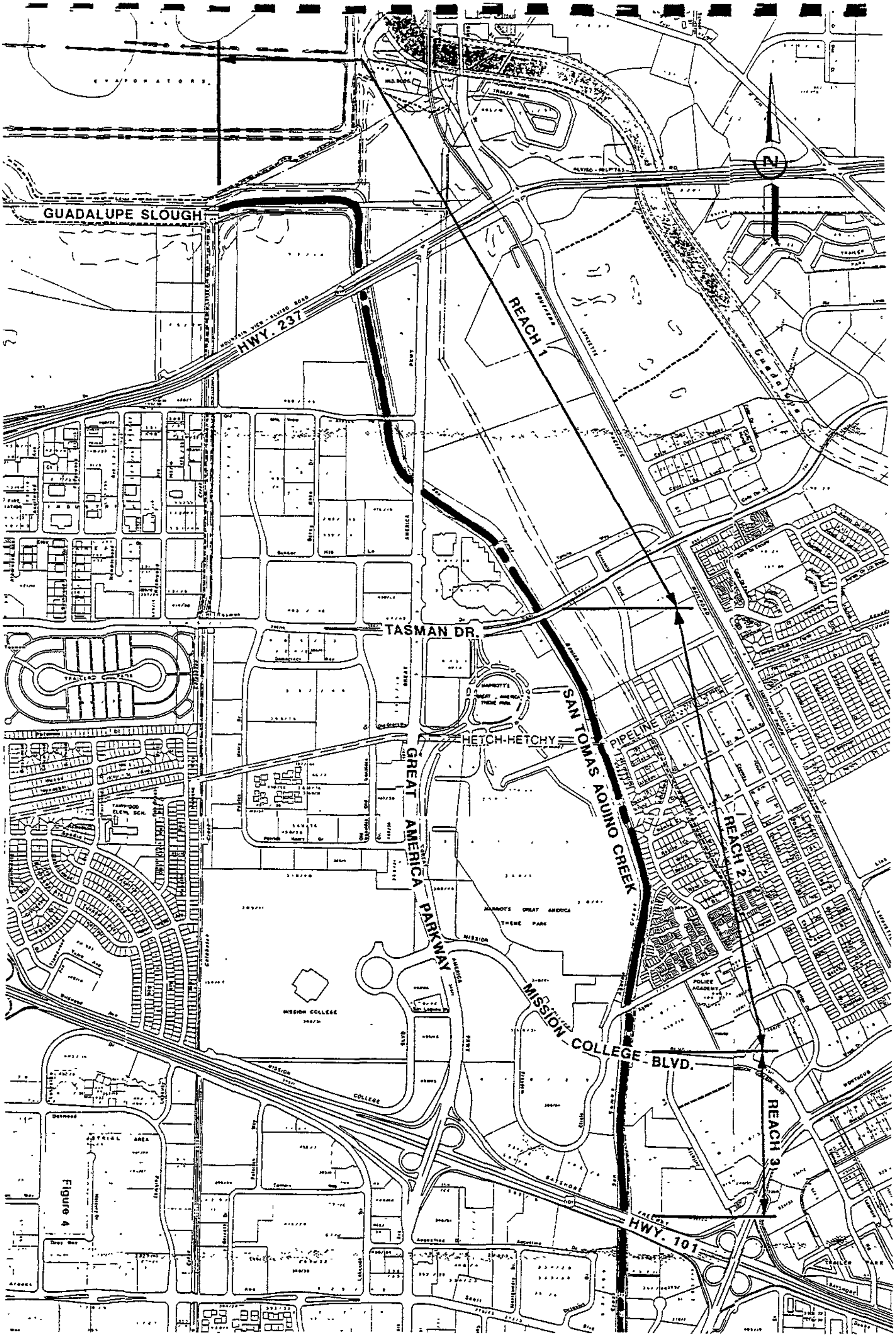
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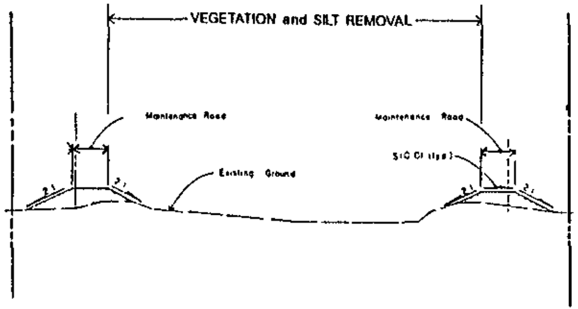
ALVISO-MILPITAS RD.
N
GUADALUPE SLOUGH
HWY. 237
REACH 1
Guadalupe
TASMAN DR.
MARRIOTT'S GREAT AMERICA THEME PARK
HETCH-HETCHY
PIPELINE
SAN TOMAS AQUINO CREEK
GREAT AMERICA PARKWAY
REACH 2
MARRIOTT'S GREAT AMERICA THEME PARK
MISSION COLLEGE
POLICE ACADEMY
MISSION COLLEGE BLVD.
REACH 3
HWY. 101
TRAILER PARK

Figure 4

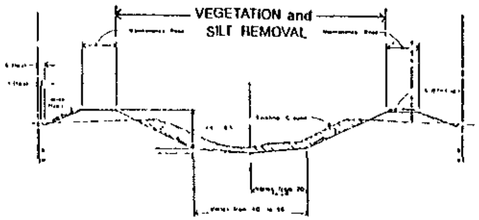
SAN TOMAS AQUINO CREEK MAINTENANCE ACTIVITIES UNDER CDFG MOU (7/90)

Guadalupe Slough toTasman Drive



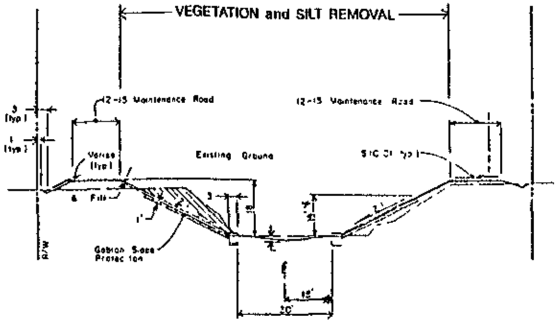
1978 Plan

Tasman Drive to Mission College Boulevard



1978 Plan

Mission College Boulevard to Highway 101



1978 Plan

GUADALUPE SLOUGH—HIGHWAY 101 (A, B, C, D, F, Gs, H, J, Ks, L, N)

Vegetation Removal

Mowing, hand labor, or herbicide spray of weeds, grasses, and aquatic vegetation on channel bottom, overflow channel, floodplain, and bank to maintain design capacity (B).

Removal of woody and herbaceous vegetation with hand labor and tools on channel bottom and bank to maintain design capacity (G).

Removal of trees or branches that are in imminent danger of falling, fallen trees and associated debris to maintain channel design capacity (H).

See also F below.

Silt Removal

Removal of vegetation, silt, debris, and other obstructions within 100 feet of bridges, box culverts, and outfalls to maintain structure's design function (F).

Removal of accumulated sediment, debris, rubbish and other obstructions in channels in alternating years to maintain design capacity (Ks).

Removal of accumulated sediment, debris, rubbish and other obstructions in channels to maintain low flow channel capacity of fish passage or habitat as identified in District environmental document (L).

Erosion Control

Repair of failed rock, gabion, concrete-lined or sacked concrete riprap bank protection to maintain bank stabilization measures previously installed (N).

Figure 6

APPENDIX B

(ADDENDUM)

BOARD OF DIRECTORS AGENDA MEMORANDUMS

CONFORMED COPY

R-Tail

FC 1025 (01-13-92)

AGENDA MEMORANDUM

AGENDA DATE 8/22/95 ITEM NO. 2f DEPARTMENT Flood Control

ZONE NC PROJECT NO. 2019 NAME San Tomas Aquino Creek—Highway 237 to Highway 101

SUBJECT: Engineer's Report for Urgent Remedial Flood Control Measures on San Tomas Aquino Creek From Highway 237 to Highway 101 (Santa Clara)
i) Resolution

RECOMMENDATION:

That the Board adopt the resolution specifying intention to undertake work of improvement within the North Central Zone of Santa Clara Valley Water District and providing for notice of time and place of public hearing.

RATIONALE:

Board had requested an action plan for responding to high water observed on Guadalupe River and San Tomas Aquino Creek. The action plan was presented to the Board on June 20. The Guadalupe Engineer's Report was adopted by the Board on July 25. This Engineer's Report is the final element of the action plan requiring Board approval.

BACKGROUND:

Levees were constructed and the channel excavated on San Tomas Aquino Creek between Highway 237 and Highway 101 in 1980. These levees were designed to contain the 1 percent flood event at 9,100 cubic feet per second. During the floods of January and March 1995, unexpectedly high flood stages were observed. An analysis determined that the flood events corresponded to a 5-year return period and that the creek had experienced a 60 percent loss of capacity due to sedimentation and vegetation. Staff was directed by the Board to prepare a plan for remedial action to restore the creek capacity.

The Engineer's Report presents five options that were investigated as possible solutions. The recommended plan is a combination of continued maintenance programs and levee construction and is described in the attached report. The estimated project cost is $565,000.

An environmental assessment of the project has been made, and it has been determined to be categorically exempt from the California Environmental Quality Act.

FINANCIAL IMPACT:

The project cost is $565,000 which is available in the current maintenance budget. A budget transfer may be necessary later in the year if maintenance expenditures exceed budgeted amounts. All work is proposed to be done by District forces utilizing the equipment rental contract.

APPROVE

RESOLUTION NO. 95-65

SPECIFYING INTENTION TO UNDERTAKE WORK OF IMPROVEMENT WITHIN THE NORTH CENTRAL ZONE OF SANTA CLARA VALLEY WATER DISTRICT AND PROVIDING FOR NOTICE OF TIME AND PLACE OF PUBLIC HEARING THEREON

WHEREAS, the North Central Zone of Santa Clara Valley Water District has been duly and regularly established and exists pursuant to the provisions of the Santa Clara Valley Water District Act; and

WHEREAS, on the 22nd day of August 1995 the report of the District's Engineer was duly filed with this Board containing information in regard to a work of improvement ("project") for San Tomas Aquino Creek in said Zone showing:

1. A general description of the project together with general plans and profiles relating thereto;
2. A general description of and maps showing the location of the proposed project and the lands, rights of way, and easements required therefor; and
3. An estimate of the cost of the proposed project and means of financing these costs.

NOW, THEREFORE, be it resolved by the Board of Directors of Santa Clara Valley Water District as follows:

SECTION 1

a. That the public interest and convenience require and it is the intention of this Board to undertake said project within said Zone in accordance with the Engineer's Report heretofore filed on the 22nd day of August 1995 with this Board, to which said report, together with the maps showing the general location and general construction of the said project in said report contained, reference is hereby made for further particulars;

b. That this Board does hereby find and determine that the said proposed work is for the benefit of said Zone and this Board further determines and declares that the cost and expense of said work shall be chargeable and charged upon property within said Zone;

SECTION 2

That the Engineer of this District has estimated the approximate cost of the construction of said project for the said Zone to be $565,000 which costs shall be borne by the property within said Zone as aforesaid;

SECTION 3

That the aforesaid Engineer's Report, containing maps and general construction plans of the said Zone, showing the general location and general construction of said project, have been prepared by said District

Engineer for public inspection by any interested person and may be seen at the

Santa Clara Valley Water District	Alviso Branch Library	Santa Clara Central Library
5750 Almaden Expressway	1060 Taylor Street	2635 Homestead Road
San Jose, CA 95118	San Jose, CA 95002	Santa Clara, CA 95051

which are hereby designated as the public places where a copy of said maps, showing the location, and general construction plans of said project may be viewed; that such maps and plans shall be posted at said public places for at least 2 weeks prior to the public hearing hereby fixed;

SECTION 4

That the 5th day of September 1995 at the hour of 9:15 a.m. in the Santa Clara Valley Water District Board Room, 5750 Almaden Expressway, San Jose, California, be and the same are hereby fixed as the time and the place where this Board will consider all written and oral objections to the proposed project;

SECTION 5

That the Clerk of this Board be and is hereby directed to cause notice to be given to said public hearing by the publication of a notice thereof once a week for two consecutive weeks prior to the date fixed for said public hearing, the last publication of which notice shall be at least 7 days before said hearing, in the San Jose Mercury, a newspaper of general circulation circulated in said Zone, and hereby designated by this Board to be the newspaper most likely to give notice of said public hearing to the residents and property owners in said Zone; said notice shall be in words and figures as set forth in Attachment A to this Resolution, the terms of which are hereby incorporated by this reference.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District on August 22, 1995, by the following vote:

AYES: Directors [illegible] GROSS J. JUDGE
[illegible] S. SANCHEZ L. WILSON

NOES: Directors None

ABSENT: Directors [illegible]

SANTA CLARA VALLEY WATER DISTRICT

/s/ ROSEMARY C. KAMEI

By: ______________________
Chair/Board of Directors

ATTEST: SUSAN A. PINO

/s/ Lauren L. Keller
____
Clerk/Board of Directors
CLERK PRO TEM OF THE BOARD OF DIRECTORS

ATTACHMENT A

NOTICE OF TIME AND PLACE OF PUBLIC HEARING ON PROPOSED WORK OF IMPROVEMENT AND COSTS THEREOF WITHIN THE NORTH CENTRAL ZONE OF SANTA CLARA VALLEY WATER DISTRICT

NOTICE IS HEREBY GIVEN that the 5th day of September 1995 at the hour of 9:15 a.m. in the Santa Clara Valley Water District Board Room, 5750 Almaden Expressway, San Jose, California, is the time when and the place where a public hearing will be held on the Resolution of the Board of Directors of the Santa Clara Valley Water District specifying intention to undertake a work of improvement ("project") within and for the benefit of the North Central Zone of the Santa Clara Valley Water District;

That plans for the construction of said project are contained in an Engineer's Report of proposed improvements for the said Zone entitled "San Tomas Aquino Creek Engineer's Report From Highway 237 to Highway 101," which said report also contains maps of the Zone showing the general location and general construction of said project and is on file in the office of the Clerk of the Board of Directors, 5750 Almaden Expressway, San Jose, California, and may also be seen by an interested person at

Alviso Branch Library
1060 Taylor Street
San Jose, CA 95002

Santa Clara Central Library
2635 Homestead Road
Santa Clara, CA 95051

That the cost of the work to be borne by said Zone, according to engineering estimates is $565,000;

That at the time and place fixed for said hearing, or at any time to which said hearing may be continued, said Board will consider all written and oral objections to the proposed project; that upon the conclusion of the hearing the Board may abandon the proposed project or proceed with the same unless prior to the conclusion of said hearing written protests against the proposed project signed by a majority in number of the registered voters resident within said Zone be filed with the Board, in which event further proceedings relating to such project shall be suspended for not less than 6 months following the date of the conclusion of said hearing, or said proceedings may be abandoned in the direction of the Board;

That any registered voter residing within the District may file a written protest against the proposed project at said hearing prior to its conclusion, or such protest may be filed prior to the time of such hearing in the office of the Clerk of said District Board, 5750 Almaden Expressway, San Jose, California.

Dated: AUG 2 , 1995

/s/ Lauren L. Keller

Susan A. Pino
Clerk/Board of Directors

CLERK PRO TEM OF THE BOARD OF DIRECTORS

FC 1025 (01-13-92)

AGENDA MEMORANDUM CONFORMED COPY

AGENDA DATE 9/5/95 ITEM NO. 3 DEPARTMENT Water Resource Management

ZONE NC PROJECT NO. NAME San Tomas Aquino Creek—Route 237 to Highway 101

SUBJECT: Public Hearing on Engineer's Report for Proposed Flood Control Improvements on San Tomas Aquino Creek From Route 237 to Highway 101 (Santa Clara)

i) Resolution Approving Report of Engineer and Determining to Proceed With Work

RECOMMENDATION:

That the Board adopt the resolution

RATIONALE:

On August 22, the Board set a public hearing on the report for September 5, 1995.

BACKGROUND:

Levees were constructed and the channel excavated on San Tomas Aquino Creek between Highway 237 and Highway 101 in 1980. These levees were designed to contain the one percent flood event at 9,100 cubic feet per second. During the floods of January and March 1995, unexpectedly high flood stages were observed. An analysis determined that the flood events corresponded to a five-year return period and that the creek had experienced a 60 percent loss of capacity due to sedimentation and vegetation. Staff was directed by the Board to prepare a plan for remedial action to restore the creek capacity.

The Engineer's Report presents five options that were investigated as possible solutions. The recommended plan is a combination of continued maintenance programs and levee construction.

An environmental assessment of the project has been made, and it has been determined to be categorically exempt from the California Environmental Quality Act.

A draft resolution has been prepared which approves the report and authorizes District staff to proceed with final design and construction. Work will begin immediately upon Board approval.

FINANCIAL IMPACT:

The estimated project cost is $565,000, which is available in the current maintenance budget. A budget transfer may be necessary later in the year if maintenance expenditures exceed budgeted amounts. All work is proposed to be done by a combination of District forces and the current equipment rental contract.

APPROVED
SEP 5 199

RESOLUTION NO. 95-66

APPROVING GENERAL CONSTRUCTION PLANS IN REPORT OF ENGINEER AND DETERMINING TO PROCEED WITH WORK OF PROVIDING FLOOD PROTECTION MEASURES ON SAN TOMAS AQUINO CREEK FROM ROUTE 237 TO HIGHWAY 101

WHEREAS, the North Central Zone of Santa Clara Valley Water District has been duly and regularly established and exists pursuant to the provisions of the Santa Clara Valley Water District Act; and

WHEREAS, on the 22nd day of August 1995, the Report of the District Engineer was filed with this Board, which report consisting of maps and general construction plans for San Tomas Aquino Creek from Route 237 to Highway 101 shows:

1. A general description of the proposed work of flood control protection measures ("project"), together with plans and profiles relating thereto;
2. A general description of and maps showing the location of the proposed project and the lands, rights of way, and easements required therefor; and
3. An estimate of the costs of the proposed project and means of financing these costs; and

WHEREAS, this Board of Directors did on the 22nd day of August 1995 adopt its resolution declaring that the public interest and convenience require the construction of said project in accordance with said maps and general construction plans as contained in said report and specifying its intention to undertake construction of the same and setting a time and place for public hearing of said resolution, to wit, the 5th day of September 1995 at 9:15 a.m. in the Board Room of the Santa Clara Valley Water District, City of San Jose, California; and

WHEREAS, notice of the time and place of said public hearing was duly given and published pursuant to law; and

WHEREAS, on said 5th day of September 1995 at the time and place in said resolution and in said notice specified, a public hearing was duly held;

NOW, THEREFORE, be it resolved by the Board of Directors of Santa Clara Valley Water District as follows:

1. That all comments including all written and oral objections to the proposed project have been heard and considered;
2. That this Board hereby finds and determines that the requirements of the California Environmental Quality Act of 1970, as amended, and Guidelines for the implementation thereof have been met and complied with;
3. That this Board hereby approves said Engineer's Report including the general construction plans for San Tomas Aquino Creek from Route 237 to Highway 101, Project No. 2019 in said Zone;

4. That this Board hereby determines that said project is for the benefit of a single zone of the District, to wit, North Central Zone, further determines to proceed with the construction of said project in said Zone according to the said report and plans of the Engineer of this District and further determines that the cost thereof shall be borne by said Zone; and

5. That the District Engineer is directed to draw up precise plans and specifications for said project based upon the said report.

PASSED AND ADOPTED by the Board of Directors of the Santa Clara Valley Water District on SEP [illegible] 1995 by the following vote:

AYES: Directors R. FERRARO R.W. GROSS J. JUDGE R. C. KAMEI J.J. LENIHAN S. SANCHEZ L. WILSON

NOES: Directors NONE

ABSENT: Directors NONE

SANTA CLARA VALLEY WATER DISTRICT

/s/ ROSEMARY C. KAMEI

By:______________________________
Chair/Board of Directors

ATTEST: LAUREN L. KELLER

/s/ Lauren L. Keller

____
Clerk Pro Tem\Board of Directors

APPENDIX C

(ADDENDUM)

COMMENTS RECEIVED

LETTER OF COMMENT

FAX 9/5 LLKeller (RK) w/a
Sent to: DKallen (BD) "
SMWilliams "
PLWhitlock "
NOHsueh "
RETalley "

3a

SANTA CLARA VALLEY WATER DISTRICT
95 SEP -5 A 7:56

SANTA CLARA VALLEY MANUFACTURING GROUP
5201 Great America Parkway, Suite 426
Santa Clara, California 95054

Please distribute the following 3 *page(s) to the name(s) listed below:*

FOR TUESDAY, SEPTEMBER 6 BOARD MEETING
PLEASE DELIVER TO:

Chairwoman Kamei
Director Ferraro
Director Gross
Director Judge
Director Lenihan
Director Sanchez
Director Wilson

Stan William, General Manager
Kay Whitlock, Assistant General Manager
Nai Hsueh
Randy Talley

THANK YOU!

If you are having problems receiving this fax, please call the sender at 408/496-6801 Our fax number is 408/496-6804.

SANTA CLARA VALLEY
MANUFACTURING GROUP
Representing Business and Industry in the South Bay Region

GARY BURKE
President

BOARD OF DIRECTORS
ARTHUR L. MONEY
TRW Avionics and Surveillance Group
Chairman

ED ZSCHAU
IBM Corporation
Vice Chairman

JOHN A. CONOVER
Bank of America
Secretary / Treasurer

W.J. SANDERS III
Advanced Micro Devices, Inc.

JOHN C. LEWIS
Amdahl Corporation

ANDREW K. LUDWICK
Bay Networks

J. MICHAEL FULTON
Comerica Bank California

DONALD LITTLER
GTE Government Systems Corp

WILLIAM F. CRAVEN
Hewlett Packard Company

GORDON E. MOORE
Intel Corporation

CAROL KIECKER
Kaiser Permanente

SAM ARAKI
Lockheed Martin Missiles & Space

DAVID A. BOSSEN
Measurex Corporation

GILBERT F. AMELIO
National Semiconductor

PETER C. NELSON
PG&E

JAY T. HARRIS
San Jose Mercury News

KO NISHIMURA
Solectron Corporation

SCOTT G. McNEALY
Sun Microsystems, Inc.

KENNETH M. TAYLOR
Syntex (USA) Inc

ARTHUR L. ROBERTS
United Defense, LP, International Division

J. TRACY O'ROURKE
Varian Associates, Inc

Advisor to the Board
DAVID PACKARD
Hewlett Packard Company

Working Council Chair
DAVE SANDRETTO
IBM Corporation

September 1, 1995

The Honorable Rosemary Kamei, Chair
and Members of the Board
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, California 95118

Re: San Tomas Creek Planning Study

Dear Chairwoman Kamei and Members of the Board:

On behalf of the Santa Clara Valley Manufacturing Group (SCVMG), I am writing to urge your approval of the staff recommendations for emergency flood control measures to be implemented on San Tomas Creek north of Highway 101.

As you are aware, the SCVMG represents 115 of Silicon Valley's high-tech manufacturing and manufacturing-related companies who collectively employ nearly one third of the local work force. The issue of flood control is of critical importance to our members, a number of whom are located north of Highway 101 in the area of potential impact should the San Tomas Creek. The January and March 1995 rain events have heightened the awareness of public and private entities, alike, on the overwhelming implications of flooding along this and other local flood control channels.

I cannot over-emphasize the economic impact on local businesses and their employees if a flood event closes this area. At the request of District staff, the SCVMG has compiled the following data to demonstrate this potential.

INDUSTRIAL IMPACT ESTIMATE
FLOODING ON NORTHERN REACHES OF SAN TOMAS AQUINO CREEK

By: SCVMG
Rev. August 31, 1995

BUSINESS TYPE	ESTIMATED TIME OUT OF OPERATION	ESTIMATED EMPLOYEES AFFECTED	ESTIMATED COSTS PRODUCTION LOSSES	REAL PROPERTY LOSSES	CLEANUP MEASURES	OTHER (as noted)
Semiconductor Manufacturing	90 days	4,800	$6.5 million/day	$221 million	$24 million	
Electronics Manufacturing	4-6 weeks	340	$0.5 - $1.0 million	$2.0 - $3.5 million	$350,000 - $500,000	
Conversion Center	4-8 weeks	85	$250,000 - $500,000	$1.0 - $1.5 million	$150,000 - $250,000	Derivative economic loss est. $4.0 million/month

SCVMG encourages the District to continue your cooperative efforts with the Army Corps of Engineers and the U.S. Environmental Protection Agency to resolve outstanding issues related to permitting the long-term flood control measures identified in the Engineer's Report. We strongly support implementation of these measures for maximum protection, and hope that the economic impact data provided above will be useful in expediting receipt of the necessary permits. SCVMG would be happy to assist in collecting additional data, should it be necessary.

In summary, SCVMG respectfully urges your support of the emergency measures recommended in the Engineer's Report. The area north of Highway 101 is a vital component of the regional economy that must be protected from potential flooding this winter.

Sincerely,

Elizabeth Zimmermann

Elizabeth K. Zimmermann
Director, Environmental Programs

cc: Stan Williams, General Manager, SCVWD
Kay Whitlock, Assistant General Manager, SCVWD
Nai Hsueh, SCVWD
Randy Talley, SCVWD